ROYAL STATISTICAL SOCIETY
17 JUL. 1900

County Borough of Derby.

ANNUAL REPORT

OF THE

MEDICAL OFFICER OF HEALTH,

FOR THE

YEAR 1899,

BY

William J. Howarth, M.D., D.P.H., &c.,

Medical Officer of Health, and Medical Superintendent of the Borough Isolation Hospital.

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Presented to the Sanitary Committee, April 30th, 1900,
and ordered to be printed.

County Borough of Derby.

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Medical Officer of Health.

WILLIAM J. HOWARTH, M.D., D.P.H., &c.

Public Health Department,

Ford Street, Derby,

April 30th, 1900.

TO THE

Chairman and Members of the Sanitary Committee.

Gentlemen,

I beg to present the following report upon the Health and Sanitary condition of the Borough of Derby for the year 1899, being the 23rd Annual Report of the Medical Officer of Health.

I am, Gentlemen,

Yours obediently,

WILLIAM J. HOWARTH,

Medical Officer of Health.

By order of the Local Government Board, dated March 23rd, 1891, Article 18, Section 14, it is prescribed that the Medical Officer of Health shall "prepare an Annual Report, to be made to the "end of December in each year, comprising a summary of the "action taken during the year for preventing the spread of disease, "and an account of the sanitary state of his district generally at "the end of the year. The report shall also contain an account "of the enquiries which he has made as to conditions injurious "to health existing in his district, and of the proceedings in which "he has taken part or advised under the Public Health Act, "1875, so far as such proceedings relate to those conditions; "and also an account of the supervision exercised by him or "on his advice, for sanitary purposes over places and houses that "the Sanitary Authorities have power to regulate, with the nature "and results of any proceedings which may have been so required "and taken in respect of the same during the year. It shall also "record the action taken by him or on his advice, during the "year, in regard to offensive trades, and to factories and work-"shops. The report shall also contain tabular statements (on "forms to be supplied by the Local Government Board, or to "the like effect) of the sickness and mortality within the district, "classified according to diseases, ages, and localities."

STATISTICAL SUMMARY, 1899.

Population estimated to the middle of 1899	Males	52,140	Total	106,401
	Females	54,261		
Marriages				961
Annual rate of Persons Married per 1,000 of the population				18.06
Births	Males	1,556	Total	2,984
	Females	1,428		
Annual rate of Births per 1,000 of the population				28.04
Deaths	Males	950	Total	1,775
	Females	825		
Annual rate of Mortality per 1,000	Males	18.2	Total	16.68
	Females	15.2		
Excess of Registered Births over Deaths				1,209
Estimated increase of Population during the year				1,567

Area.—The area of the Borough is 3,445 acres.

Elevation.—The population of Derby resides at a mean elevation of 182 feet above sea level, the highest point being at the Borough Boundary in Burton Road, 325 ft., and the lowest at "The Siddals," 142 ft. The elevation at the Market Place is 157 ft.

Houses.—At the census in 1891 there were 20,423 houses in this area, 19,199 of which were inhabited, 1,224 were empty, and 115 were in the course of erection.

Density.—The mean density of the Borough is equal to 30 persons per acre. The density of the various Wards is as follows:—Arboretum, 59; King's Mead, 50; Becket, 47.4; Babington, 42.7; Castle, 30.8; Friargate, 23.4; Litchurch, 16.6; and Derwent 10.8 persons per acre.

Annual Rateable Value.—The rateable value of the Borough for 1899 was £388,881 13s. 8d. for District Rate purposes and £444,639 6s. 8d. for Poor Rate purposes.

TABLE **A.**—Population, Number of Births, Total Deaths, and Deaths from certain causes, with the rates per 1,000 of the Population in the Borough of Derby for the past twenty-two years.

YEAR.	Population.	Corrected Number of Deaths.	Death-rate per 1,000 living.	Births.	Birth-rate per 1,000 living.	Deaths from seven principal Zymotic Diseases.	Zymotic rate per 1,000 living at all ages.	Deaths from Phthisis.	Phthisis Death-rate.	Infantile Mortality per 1,000 Births.	Deaths from Respiratory Diseases exclusive of Phthisis.	Respiratory Death-rate.
1878	80,385	1,613	20.1	3,092	38.4	257	3.1	162	2.0	148	296	3.6
1879	80,385	1,970	24.5	3,139	39.4	380	4.7	147	1.8	132	407	5.0
1880	80,385	1,614	20.1	3,050	37.9	233	2.8	140	1.7	145	224	2.7
1881	81,470	1,529	18.9	3,156	38.8	166	2.03	131	1.6	129	287	3.5
1882	82,687	1,533	18.5	2,959	35.7	187	2.2	140	1.6	139	259	3.1
1883	83,922	1,549	18.6	3,074	36.6	144	1.7	146	1.7	146	263	3.1
1884	85,176	1,569	18.4	3,013	35.3	181	2.1	131	1.5	143	259	3.0
1885	86,449	1,591	18.4	3,055	35.3	132	1.5	128	1.3	138	310	3.5
1886	87,741	1,651	18.8	3,069	35.9	166	1.8	154	1.7	148	272	3.1
1887	89,052	1,683	18.9	2,858	32.9	223	2.5	146	1.6	138	247	2.7
1888	90,383	1,550	17.1	2,824	31.2	163	1.8	116	1.2	145	271	2.9
1889	91,733	1,582	17.2	2,906	31.6	133	1.4	99	1.7	147	281	3.0
1890	93,105	1,843	19.8	2,699	28.9	260	2.7	143	1.5	160	326	3.5
1891	94,146	1,765	18.7	2,885	30.5	126	1.3	139	1.4	139	158	1.6
1892	95,908	1,736	18.1	3,038	31.6	174	1.8	140	1.4	171	295	3.0
1893	97,341	1,743	17.9	3,123	32.0	190	1.9	132	1.3	155	281	2.8
1894	98,795	1,468	14.9	2,890	29.2	151	1.5	103	1.0	121	249	2.5
1895	100,272	1,669	16.6	2,900	29.01	178	1.7	105	1.0	158	254	2.5
1896	101,770	1,577	15.6	2,834	27.8	182	1.8	137	1.3	150	240	2.3
1897	103,291	1,656	16.0	2,803	27.2	173	1.6	99	.9	168	249	2.4
1898	104,834	1,756	16.8	2,860	27.28	235	2.2	133	1.2	169	257	2.4
1899	106,401	1,775	16.7	2,984	28.04	173	1.62	116	1.09	162	244	2.29

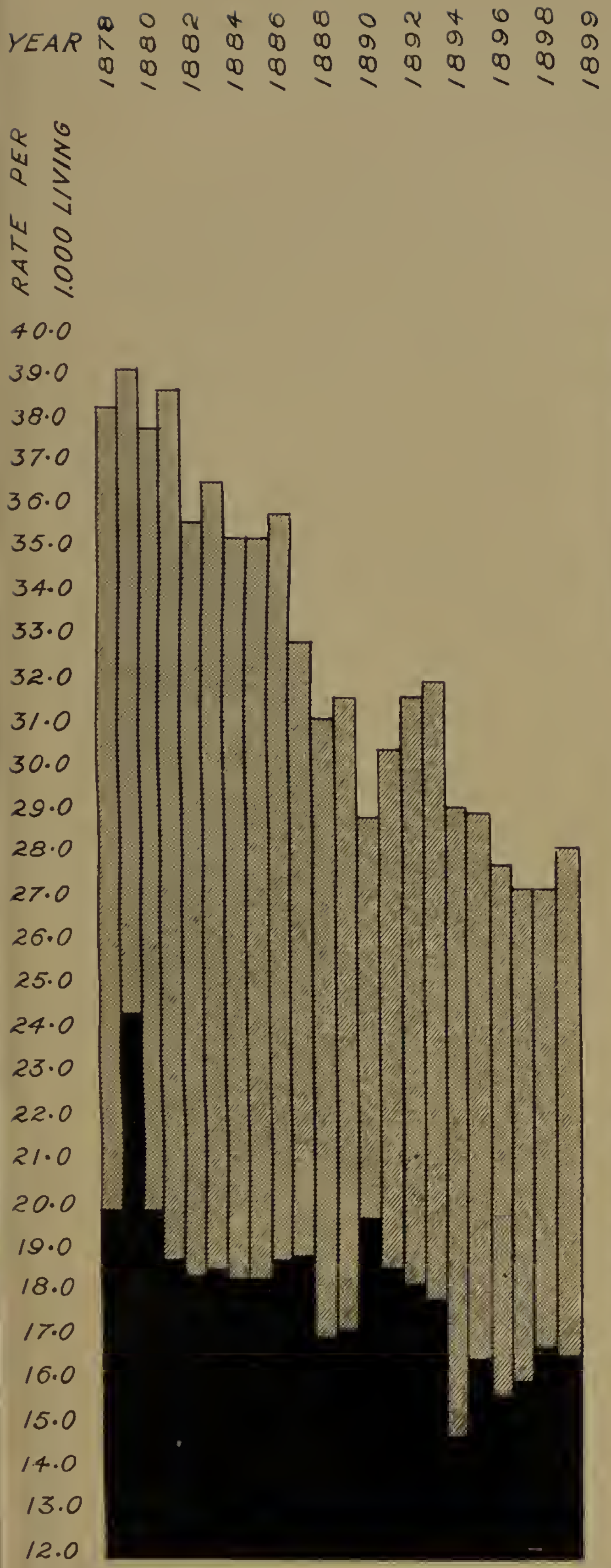

Fig. 1

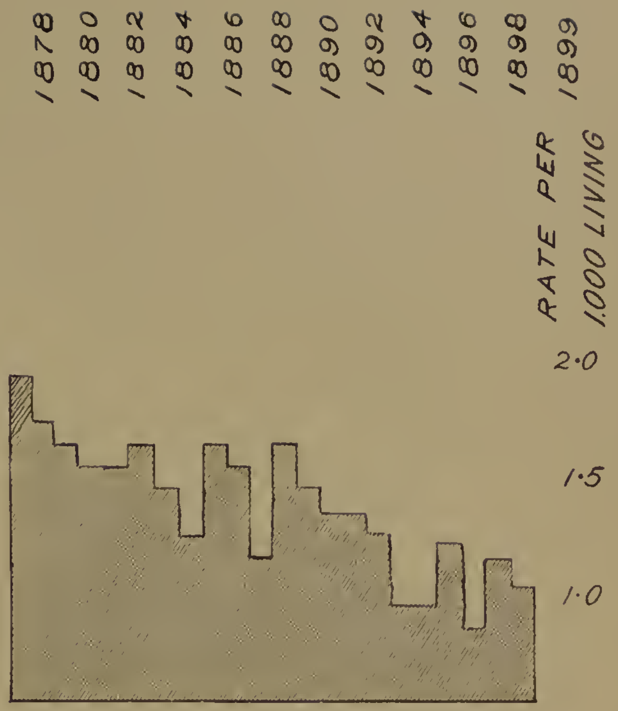

Fig 3.

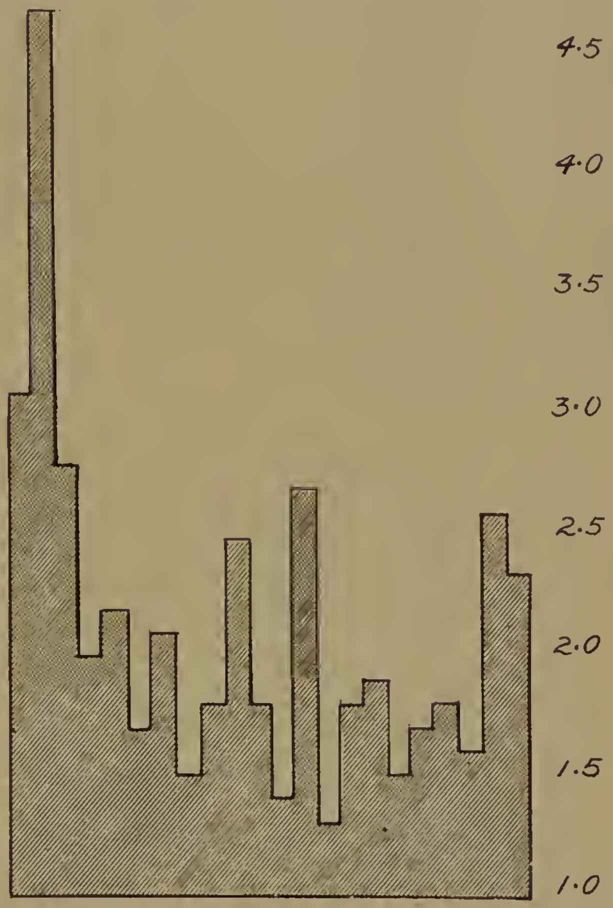

Fig 2.

FIGURE 1. Black columns represent death-rates, shaded columns birth-rates.

" 2. Represents the curve formed by zymotic rates.

" 3. Represents the curve formed by phthisis rates.

Vital Statistics.

Estimated Population.—The most important factor in vital statistics is a reliable estimate of the population. This estimate is usually obtained by assuming that the ratio of increase which took place between the census enumerations in 1881 and in 1891 will continue each year until the next census in 1901. It is evident that such an estimate is liable to extreme and varied fluctuations, and that its value is in inverse ratio to the distance from the last enumeration. The year under review was the eighth from the last census, and judging by the number of houses on the rate books, I should imagine the estimate of 106,401 as the population of the whole town up to the middle of 1899 to be somewhat understated, but not to any considerable extent. The chief difficulty exists in estimating the populations of sub-divisions of the town such as are required for ~~as~~ statistical purposes. Take for instance Derwent Ward; at the census of 1881 this Ward had a population of 5,421, and in 1891, 5,666, being an increase of about 4 per cent., and assuming that the increase had continued at the same rate until the middle of 1899 the population would have been 5,897 (see Appendix B); but since the last census Derwent Ward has been a centre of active building operations, and an increase considerably in excess of the above ought to be recorded. The rate book is of assistance, and I find that the number of assessments for Derwent Ward in October, 1899, numbered 1,892, and for the whole town 25,391; now assuming that the population per assessment is the same in the ward as in the whole town, the result would give a population of 7,932, or more than 2,000 in excess of the above estimate. The mortality rate would suggest that the latter is more nearly correct. Derwent Ward on the whole does not show an excess of insanitary conditions as compared with the rest of the Borough, but the 134 deaths based on the first estimate of the population would give it the highest mortality, viz.: 22.7 per 1,000; whereas if calculated on the second estimate the result is a rate of 16.9 per 1,000, or about equal to that of the whole town. I lay special stress on the above because in my report last year I drew attention to the high death-rate which existed in Derwent Ward. (See page 12).

The following Table shows the difference between the ward populations if calculated upon the increase which was found to have taken place between the years 1881 and 1891, and if based upon information obtained from the rate book.

WARD.	Population estimated on		Death-rate based on Population	
	Decennial Increase.	Number of Assessments.	as given in first column.	as given in second column.
Arboretum	19,786	19,545	15.3	15.5
Babington	13,029	13,054	13.0	13.0
Becket	20,894	20,464	16.1	16.4
Castle	10,484	11,177	19.5	18.3
Derwent	5,897	7,932	22.8	16.9
Friargate	14,801	13,009	14.8	16.8
King's Mead ...	13,795	13,511	21.9	22.3
Litchurch	7,715	7,704	14.8	14.8

Although there is a noticeable approximation in the case of some of the numbers there is a great difference in others, such as might easily give rise to wrong deductions. If a quinquennial census could be taken it would be of enormous value in assisting sanitary authorities in their work, and even if the additional census consisted only of enumeration with a subdivision into sex, and the twelve age periods, coming as it would half way between the more complete decennial census, an important addition to the basis of our statistics would result.

The estimated increase of the population for the year is 1,567, as compared with increases of 1,540 in 1898, and 1,521 in 1897.

Marriages.—The number of marriages solemnized during 1899, was 961, which gives a rate of persons married equal to 18.06 per 1,000 of the population. The following are the numbers for the previous six years:—

Year.	1893.	1894.	1895.	1896.	1897.	1898.	1899.
Number of Marriages.	806	876	849	908	953	961	961
Rate.	16.5	17.7	16.9	17.4	18.4	18.3	18.06

Births.—The births registered during the year numbered 2,984, of which there were:—

		Males.	Females.		Total.
Legitimate	...	1,496	1,380	2,876	2984.
Illegitimate	...	60	48	108	

The illegitimate births were thus 3.6 per cent. of the total. The birth-rate in 1899 was 28.04 per 1,000, and the registered births exceeded the deaths by 1,209. The excess of births over deaths for the past seven years is shown in the following table:—

Year.	1893.	1894.	1895.	1896.	1897.	1898.	1899.
Births.	3123	2890	2909	2834	2803	2860	2984
Deaths.	1743	1468	1669	1577	1656	1756	1775
Excess of Births over Deaths.	1380	1422	1240	1257	1147	1104	1209

Annual Rate of Mortality.—The total number of deaths for the year 1899 was 1,856, as against 1,830 in 1898; of these deaths 81 were those of strangers, viz.: 52 males and 29 females, leaving a total of 1,775 deaths occurring amongst persons usually residing in the Borough, but making no allowance for Derby residents dying outside the town. The Registrar-General returns the total as 1,796; the difference between the two figures being due to the fact that the death of every person registered as occurring in any public institution in the town is made the subject of inquiry, and if the person is found to be a non-resident the death is deducted from the total. The total death-rate from all causes within the Borough was therefore 16.68 per 1,000 of the population, as against 16.8 per 1,000 in 1898, and 16.0 per 1,000 in 1897. Table A, and the accompanying Chart give particulars of deaths for previous years.

Annual Rate of Mortality as compared with other large Cities and Towns of England and Wales.—The recorded death-rate for the Borough of Derby, without reference to age and sex distribution, as returned by the Registrar-General is 1.4 per 1,000 less than the recorded death-rate for England and Wales, and 3.2 per 1,000 less than the recorded death-rate for the 33 large towns, but the age and sex distribution of a population has an important influence upon the death-rate in the following manner. The deaths amongst females are fewer than amongst males, consequently a population containing an undue proportion of females, such as might be expected in a town where there are a large number of domestics engaged, or in which the industries common to the town attract a large number of females to work, would show a correspondingly lower death-rate, sanitary conditions being equal, than one containing a less proportion of females though not to any marked degree. The variation observed in the mortality at different ages is of much greater importance. From 15 to 45—working ages—the death-rate, as is shown in Table C, is much lower than amongst persons over that age, and a continual exodus of persons at the working ages is taking place from the country districts into the towns. Derby is a great railway centre, and consequently attracts a large number of persons at those ages at which the probability of death is lowest, with the result that the death-rate is lowered to a certain extent by this excess of population at the years of greatest vitality; it follows therefore that to fairly compare the death-rate in this town with that recorded in the country at large, due weight should be given to the influence of these two disturbing factors. The Registrar-General has worked out a factor for each town (see column 2, Table B), by the use of which the death-rates may be made comparable, and if the recorded death-rate of the town is multiplied by this factor, the death-rate, corrected for age and sex distribution, is obtained. If the death-rate for Derby is therefore compared with the rate for England and Wales, it will be seen that instead of being lower than that for the country, the mortality would be .35 higher if the age and sex constitution of the population of Derby were the same as that for England and Wales; this assumes a more practical aspect if the figures in column 5 are considered, from which it will be seen that if among a certain population in England and Wales there had been 1,000 deaths recorded, that same population if living in Derby would have shown 1,019 deaths. I refer to the above to emphasise the fact that although there is a low recorded death-rate for the Borough, there is still ample room for improvement.

Derby occupies the fifth position on the list of the 33 great towns with respect to the lowness of the death-rate, whether regarded from the point of view of recorded, or corrected death rate. With respect to the mortality from special diseases the town compares favourably with the other 32 large towns, the rate of .08 per 1,000 for whooping cough being the lowest rate recorded from that disease, and a lower rate than .08 per 1,000 from diphtheria is noted in only two other towns. Infantile mortality was at the rate of 162 per 1,000 births, and "fever" rate was .14 per 1,000. The rates for measles (.22), Scarlet (.24), and diarrhœa (.89) are less favourable than the above.

No uncertified death was registered in Derby during the year under review.

TABLE **B.**—Recorded and corrected Death-rates per 1,000 persons living in 33 Great Towns during the year 1899.

Towns in the order of their corrected Death-rates.	Standard Death-rate.*	Factor for correction for sex and age distribution.†	Recorded Death-rate 1899.	Corrected Death-rate 1899.‡	Comparative Mortailty Figure 1899.§
	COL. 1.	COL. 2.	COL. 3.	COL. 4.	COL. 5.
England & Wales	19.15	1.0000	18.33	18.33	1,000
England & Wales less the 33 Towns	19.45	0.9845	17.29	17.02	929
33 Towns ...	17.71	1.0813	20.19	21.83	1,191
Croydon ...	18.37	1.0424	15.04	15.68	855
Norwich ...	19.99	0.9579	17.29	16.56	903
Cardiff	17.16	1.1159	15.42	17.21	939
West Ham ...	17.75	1.0788	16.71	18.03	984
Derby	**17.36**	**1.1031**	**16.93**	**18.68**	**1,019**
Huddersfield ...	16.47	1.1627	16.19	18.82	1,027
Bristol	18.45	1.0379	18.25	18.94	1,033
Brighton ...	18.94	1.0110	18.95	19.16	1,045
Leicester ...	17.64	1.0855	17.71	19.22	1,049
Swansea... ...	17.53	1.0924	18.15	19.83	1,082
Portsmouth ...	18.73	1.0224	19.70	20.14	1,099
Gateshead ...	17.83	1.0740	18.79	20.18	1,101
Hull	18.23	1.0504	19.30	20.27	1,106
Halifax	17.20	1.1133	18.25	20.32	1,109
Birkenhead ...	17.42	1.0993	19.16	21.06	1,149
London	17.97	1.0656	19.78	21.08	1,150
Plymouth ...	19.70	0.9720	21.72	21.11	1,152
Bradford ...	16.73	1.1446	18.44	21.11	1,152
Leeds	17.28	1.1082	19.14	21.21	1,157
Blackburn ...	17.05	1.1231	19.13	21.48	1,172
Nottingham ...	17.81	1.0752	19.99	21.49	1,172
Newcastle ...	17.58	1.0892	20.56	22.39	1,221
Sunderland ...	18.25	1.0493	21.48	22.54	1,230
Bolton	16.90	1.1331	19.89	22.54	1,230
Burnley	16.67	1.1487	19.63	22.55	1,230
Wolverhampton	18.30	1.0464	21.81	22.82	1,245
Birmingham ...	17.33	1.1050	20.84	23.03	1,256
Oldham	16.72	1.1453	20.47	23.44	1,279
Sheffield ...	17.22	1.1120	22.16	24.64	1,344
Preston	17.42	1.0993	22.84	25.11	1,370
Salford	17.03	1.1244	23.80	26.76	1,460
Manchester ...	16.90	1.1331	24.61	27.89	1,522
Liverpool ...	17.44	1.0980	26.38	28.97	1,580

* The Standard Death-rate signifies the rate at all ages calculated on the hypothesis that the rates at each of twelve age-periods in each town were the same as in England and Wales during the ten years 1881-90, the rate at all ages in England and Wales during that period having been 19.15 per 1,000.

† The Factor for correction is obtained by dividing the standard Death-rate in England and Wales by the standard Death-rate in each town, and is the figure by which the recorded Death-rate should be multiplied in order to correct for variations of sex and age distribution.

‡ The corrected Death-rate is the recorded Death-rate multiplied by the Factor for correction.

§ The comparative Mortality Figure represents the corrected Death-rate in each town compared with the recorded Death-rate at all ages in England and Wales in 1899, taken as 1,000.

Mortality in Age Groups.—The statement that the annual death-rate of the town is 16.6 per 1,000 of the population is of the greatest value for the purpose of comparing the mortality rates recorded in Derby with those recorded in other towns, and for comparing the statistics of one year with another, but an age analysis of this death-rate by examining the mortality at various age groups exposes the chief contributing ages to this gross mortality, and if followed by an inquiry into the causes of any differences which may be exhibited, becomes of the highest importance in enabling conclusions to be drawn as to the direction in which improvements can be effected with the greatest expectant value.

The following Table shows the recorded death-rates at 6 groups of ages; the period of childhood, 0 to 5 years; school age, 5 to 15 years; puberty, 15 to 25 years; manhood, 25 to 45 years; commencing decline, 45 to 65 years; and more rapidly approaching disintegration at years upwards of 65. A cursory examination of the table shows at a glance three divisions, a high death-rate below 5 years of age, followed by a low rate from the age of 5 to 45, then a higher death-rate at ages over 45. The actual mortality rate for the period 5 to 45 being slightly under 5 per 1,000, with which, rates of 52, 29, and 103 form a marked contrast.

Table **C.**—Estimated Population and Death-rates at varying age groups in the Borough of Derby during the year 1899, compared with the rates for similar age periods during the decennium 1881-1890, in Derby and in England and Wales.

AGE GROUPS.	Recorded Deaths.	Estimated Population 1899.	Death-rate per 1,000 living at each age group.	Death-rate per 1,000 in the decennium 1881-1890, for same age periods in	
				Derby.	England and Wales.
Under 5 ...	660	12,674	52.1	56.47	56.82
5 and under 15	66	25,312	2.7	3.48	4.2
15 ,, ,, 25	78	20,728	3.8	4.98	4.95
25 ,, ,, 45	230	29,683	7.8	8.25	9.2
45 ,, ,, 65	359	14,321	25.1	22.84	22.8
65 and upwards	382	3,683	103.7	94.46	89.6
Total	1,775	106,401	16.68	17.65	19.08

If the mortality under 5 years of age is further subdivided into each year, it will be seen that the large mortality among children is principally due to the deaths under one year of age, and that there is a rapidly decreasing mortality as age increases, thus :—

Mortality per 1,000 *living, including the deaths of seven strangers.*

*under one year.	under 2 years.	under 3 years.	under 4 years.	under 5 years.	Total under 5 years.
184.9	38.9	11.9	11.5	9.1	52.1

An examination of the causes of deaths in infants as set out in table E shows that nearly 50 per cent. of the deaths were due to disorders of the digestive tract, such as diarrhœa and allied conditions, the exact figures being, diarrhœa, 75; Tabes-Mesenterica, 13; Gastro-enteritis, 41; and debility, atrophy, etc., 79; total 208. These diseases, as has been formerly noticed, are due to ignorance in respect to the method of feeding, and also to the infection of the milk by the probable specific germ which produces fatal summer diarrhœa. This infection is aided by unpaved and dirty courts, coarse pollution of the ground, and the want of suitable cupboard and food storage accommodation in many of the houses of the poor; these latter two causes are subjects worthy of the attention of your Committee, whilst the former can only hoped to be remedied by educational methods. The issuing of circulars has no great influence on the people among whom they are distributed. Hygiene and the diffusion of knowledge relating to domestic duties should form an essential feature of board school education for girls, and by that means only can we expect this ignorance to be combated.

Convulsions caused 80 deaths, and many of these must be attributed to dietetic errors, prematurity at birth resulted in 71 deaths, and chest ailments caused 35 deaths. Many of these deaths are due to careless exposure, and the dampness and accumulation of water in unpaved courts and yards undoubtedly predisposes to these affections. Seven deaths were also attributed to suffocation, and 14 to zymotic diseases other than diarrhœa. It is evident from the above facts that the two essentials necessary for any great reduction in the mortality during the early years of life are, an improvement in the conditions existing in connection with dwellings of the poorer classes, and, as I have said, the diffusion among girls of a more general knowledge of the essential principles of domestic life.

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*The mortality under one year is usually expressed as deaths of children under one per 1,000 births, which would give a mortality of 163 per 1,000 births, the 184 per 1,000 is based on the mean population, and is very liable to error, but certainly 160 per 1,000 would be under rather than over-estimating the mortality among infants.

The chief work which has been done by the Corporation in effecting these reforms has been the demolition of one small area in Willow Row, compulsory cleansing of houses, and improved drainage in many places, the substitution of the water carriage system for the privies where it has been deemed necessary, the systematic and regular flushing of courts and alleys during the months of July, August, and September, and the house to house distribution of circulars drawing attention to the attention to the great mortality among infants, and giving precautionary measures which ought to be adopted to lesson the risk.

Between the ages of 5 and 45, the causes of deaths to which attention requires to be directed are 11 cases of Scarlet Fever at ages from 5 to 10, and 13 out of the 15 cases of Enteric Fever between the ages of 10 and 40. Six deaths due to intemperance were registered between the ages of 30 and 45, and towards the latter end of the period, an increase in the cancer mortality is noticed. Phthisis is the most important disease at this period of life, no fewer than 81 deaths occurring from this disease; the reason for this has been previously alluded to in previous reports. Valvular heart disease commences to show increased fatality, and chest ailments evidence an average incidence on this period of life. Seven out of the 15 cases of suicide occurred at ages from 20 to 45.

From the age of 45 upwards, the increase in the death-rate is a rapidly progressive one towards the higher ages, just as below 5, the ~~de~~increase is rapid in the opposite direction from 5 to 1; this is seen in the following subdivision.

Mortality per 1,000 *living at the subjoined ages (including strangers).*

45 to 55	55 to 65	65 to 75	75 upwards
18.5	39.7	77.7	201.7

The principal causes of deaths between the ages of 45 and 65 were Influenza, 16; Intemperance, 6; Cancer, 44; Phthisis, 33; Cerebral troubles, 45; Heart affections, 57; and Respiratory ailments, 69; whilst at ages over 65, 98 deaths were attributed to Old age, and degenerative changes in the brain, and heart stand out most prominently. It is satisfactory to note that compared with the decennium 1881-90, the death-rates at all ages below 45 are considerably lower this year; this, of course, if continued, points to less sickness, and a greater number surviving to older years.

District Mortality Rate.—Marked variations have been shown to exist in the death-rate by examining the mortalities at different age periods, likewise by dividing the town into statistical areas, different districts can be shown to vary considerably in healthiness, and the degree of variation can be, to some extent, judged by this means.

Table D is drawn up for this purpose, and columns giving the general death-rates, as well as the mortality rates from zymotic and respiratory diseases, and from phthisis, in the various wards are shown. The general death-rate for the whole town is 16.7 per 1,000, and two wards, King's Mead and Castle, show a rate considerably in excess of this, the former by nearly 6 and the latter by nearly 2 per 1,000; whilst Becket, Friar Gate, and Derwent Wards are about equal to this rate; Arboretum, Litchurch, and Babington are well below, and to the latter wards belongs the credit of having the lowest mortality. Derwent Ward shows the highest respiratory rate, and King's Mead has the highest zymotic and phthisis rate, the latter being twice as high as in any other ward, and over seven times the mortality from this disease in Litchurch. King's Mead Ward therefore stands out prominently as the most unhealthy ward in the town, and an inquiry into the causes contributing to this result brings to light the existence of conditions which for years have been recognised as opposed to a healthy existence, and although these conditions are more frequently met with in this ward than in other parts of the town, wherever they exist they make their influence felt in a proportionate degree. The boundaries of the ward are as follows:—Wardwick, Victoria Street, Iron Gate, Queen Street, King Street, Duffield Road, Penny Long Lane, Mackworth Road, Markeaton Lane, Brook Walk, Willow Row, Bold Lane, and Cheapside. It has an estimated population of 13,511, and an acreage of 271 acres, thus giving a density of 49 persons per acre as compared with 30 per acre for the whole town. A reference to the map on page 37 will show that within this area is contained the larger portion of the old town of Derby; in the older parts, many of the streets are narrow, and although some of the houses facing these streets are fair, and the internal arrangements suggest a former period of greater prosperity, yet at the rear of these places are numerous irregularly arranged courts, containing houses defective in almost every respect, and which were evidently erected at a time when building regulations and bye-laws were non-existent. It is probable in such a district, for instance as Walker Lane, that these rear dwellings were built on the gardens belonging to the front houses after their more prosperous possessors had left this neighbourhood, on account of the increasing population in the centre of the town, and the consequent degeneration of the district as a residential quarter. Most of these better houses have been converted into tenement houses and into common lodging-houses, and are now inhabited by persons who occupy a low position in the social scale. Typical examples of these closed courts are George's Yard, Byron's Yard, and the courts on each side of Bold Lane, in the latter of which many of the houses are now being demolished, or closed with the object of future demolition either as a result of purchase by the Corporation for contemplated street improvements or by private enterprise; the numerous courts off Willow Row, Walker Lane, and the intersecting streets all furnish examples of these unhealthy courts. The persons living in these places are probably among the poorest in the town, and that circumstance combined with the fact that they inhabit houses which are unsatisfactory, both as regards arrangement on site, and internal conditions, results in an increased mortality sufficient to make the death-rate for the whole of King's Mead Ward the highest in the town. In suggesting a remedy for such a state of affairs, it is plain that when dealing with back-to-back property and houses without any through ventilation, badly arranged on a site, and which are gradually passing into a state of dilapidation, that no patching up or tinkering can produce any lasting benefit; demolition and re-arrangement of all such places offers the only possibility of a permanent and satisfactory reform. An official representation respecting two areas in Walker Lane, Goodwin Street, Willow Row, St. Helen's Street, Jury Street, and Bold Lane was made so long ago as October 7th, 1878,* under the powers conferred by the Artizans' and Labourers' Dwellings Improvement Acts, 1875-85, and a scheme was formulated which was estimated to cost a total sum of £86,540 or a net sum of £37,774; a Provisional Order was obtained confirmed by Parliament, and then the matter was dropped. I believe the cost of the undertaking was the main obstacle. Had it been proceeded with, a considerable benefit would have accrued to

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* Return made to the House of Lords, dated March 1st, 1888, number 275.

Table **D.**—Population, Density, Deaths, and certain Death Rates in the various Wards of the Borough of Derby for the Year 1899.

Wards.	Population in 1881.	Population in 1891.	Increase or decrease per cent. in inter-censal period.	Estimated population in middle of 1899.	Acreage	Density in persons per acre.	Total Deaths.	Death rate per 1,000 living.	Deaths from seven principal Zymotic Diseases	Zymotic death rate.	Deaths from Respiratory Diseases exclusive of Phthisis.	Respiratory death rate.	Deaths from Phthisis.	Phthisis death rate.
Arboretum ...	10,656	15,352	+ 44	19,545	331	59	391	15.4	29	1.48	43	2.2	22	1.12
Babington ...	9,646	11,386	+ 28	13,059	306	42.7	169	12.9	12	.91	29	2.2	10	.76
Becket ...	13,824	17,460	+ 26	20,464	423	47.4	334	16.3	38	1.84	45	2.2	20	.97
Castle ...	11,369	10,914	− 4	11,177	363	30.8	204	18.2	18	1.6	27	2.4	13	1.2
Derwent ...	5,421	5,666	+ 4	7,932	732	10.8	134	16.8	10	1.26	21	2.6	6	.75
Friargate ...	9,551	12,251	+ 28	13,009	555	23.4	218	16.7	22	1.67	33	2.53	9	.69
Kings' Mead	12,319	13,078	+ 6	13,511	271	50	301	22.2	34	2.51	31	2.29	33	2.44
Litchurch ...	8,382	8,039	− 5	7,704	464	16.6	114	14.7	10	1.29	15	1.9	3	.38
Institutions and others not accounted for above ...	...	...	...	...	...	...	81	...	3	...	6	...	3	...
Totals ...	81,168	94,146	+ 16	106,401	3,445	30	1,856	17.44	176	1.65	250	2.35	119	1.11

Derby. This district is now as it was then, probably the worst in the town, the steps which have been taken to improve it are somewhat as follows.

Attempts have been made to improve the atmosphere of the district by removing numbers of the defective privies and ashpits and substituting the water-carriage system, the drainage of many courts has been reconstructed, and overcrowding has been strongly opposed when detected. Your late Medical Officer reported numerous houses as unfit for habitation; some have been closed and ultimately demolished, and in other cases an improvement has been effected by throwing two back-to-back houses into one where it has been possible; one area, Court 1, Willow Row, consisting of some 30 houses of the worst type, ha~~ve~~s been purchased and the site cleared, and the Improvement Committee, as previously mentioned, have taken over others for street improvements. These reforms have resulted in a material lowering of the death-rate for the four years 1892-95. The death-rate was certainly not less than 30 per 1,000, probably more, since the records do not account for the deaths in public institutions which are considerable from this district, whilst in 1899, the rate including the latter deaths was 24 per 1,000, a rate which, however, compares unfavourably with the general rate for the town, 16.7. At the present time, the Corporation is in negotiation for the purchase of another small area in Walker Lane, under powers contained in Sec. 68 of the Derby Improvement Act of 1879, with the object of subsequent demolition and clearance of the site, which introduces the question of re-housing. At the present time the demolitions in this district have not resulted, so far as a census of the district shows, in any marked degree of overcrowding, many of the persons having found accommodation elsewhere, but the class of houses such persons require is now getting extremely scarce, and no further demolitions ought to be taken in hand without first erecting suitable houses for the persons who would be displaced. At the last census overcrowding in the whole town was shown not to exist to any considerable amount if the standard is accepted that overcrowding exists when ordinary tenements contain more than two occupants per room, bedrooms and sitting-rooms included. Based upon that standard, Derby showed only 2.69 per cent. of overcrowded houses, and a better percentage was only found in Leicester with 2.22, and in Portsmouth with 1.74 per cent., which compare favourably with over 40 per cent. in Gateshead, 35 and 32 per cent. respectively in Newcastle and Sunderland, and three other towns with over 20 per cent. For the better class working man, private enterprise and the building operations of the Co-operative Society have provided, and the housing question so far as concerns this class and those above it, is not a pressing one in this town, but for the class of persons who live in the district mentioned above, private enterprise does not, nor can it, cater with any hope of reasonable return for the outlay.

That a healthy existence is not incompatible with residence in King's Mead Ward is shown by examining the mortality rate in other parts of the ward, ~~and~~ For the purpose of showing the differences between healthy and unhealthy parts of the ward, I have taken an area approximating in size and population to that situate between St. Helen's Street, Willow Row, Walker Lane, and portions of King Street and Queen Street, namely, an area comprising Whitecross Street, Clover Street, Walter Street, Leyland Street, Cowley Street, Redshaw Street, and that portion of Parker Street lying between Elm Street and Whitecross Street, and roughly compared the conditions which exist, and which are set out as follows :—

District.	**A.** Redshaw St. area.	**B.** Walker Lane area.
Population	1932	1794
Deaths in 1899	27	43
Death-rate per 1,000 ...	14	24
Number of Houses ...	473	380
Density of Persons on site	115 per acre	198 per acre.
Number of Persons per Room	.75	1.07
Number of Houses back-to-back	none	69
Total number without through Ventilation	none	141
Number of two-roomed houses	none	60
Number of three-roomed houses	none	97
Number of houses let in Tenements	none	30
Number of Rooms to each separate Tenement (not to each house)	none	1 room, 80 ; 2 rooms, 13 ; 3 rooms, 2 ; over, 0.

Sanitary Conveniences :—

	Number of W.C.'s	Pails.	Privies.
A.	176	134	156
B.	128	128	20

Water Supply.—

Separate Supply.	Number of instances in which the supply is common to.						
	2 hses.	3 hses.	4 hses.	5 hses.	6 hses.	7 hses.	8 hses.
A. 265	27	8	18	4	2	2	2
B. 97	12	10	13	14	2	1	4
	9 hses.	10 hses.	11 hses.	12 hses.	13 hses.	14 hses.	15 hses.
A.	0	0	0	0	0	0	0
B.	1	6	1	1	0	1	1

The Redshaw Street area is a well laid-out district, and is satisfactory in every respect; good streets, good roomy houses, and large open backs, the result is a satisfactory rate of mortality which in 1899 was only 14 per 1,000, or 2.7 per 1,000 less than the rate for the whole of the Borough. In the Walker Lane area 141 houses are without means of through ventilation, and 60 of the houses have only two rooms, and in addition 30 houses are let in tenements, which are arranged for accommodating no fewer than 95 families. Notice also the water supplies in the first district: 265 houses out of 473 have a separate water supply, and in the latter only 97 out of 380, whilst 153 houses share the supply with seven or more houses, and in one case each there is only one tap to 14 and 15 houses. This does not tend to encourage either personal or domestic cleanliness. The general effect of these conditions is to make the mortality in this district not less than 10 per 1,000 higher than that recorded in the Redshaw street area.

It might be assumed that the persons in the better district pay much more for all these special advantages, but it is not so; the average rental *per room* in the Redshaw Street district is 11.12d. ~~per room~~, and in the Walker Lane district 10.8d., and the rent in the latter district would actually exceed the former if the total rentals of the rooms let in lodgings were taken as the basis instead of the rent of the house. There exist houses where the house-farmer pays 2/- weekly for a two-roomed house, and by placing in it a few articles of furniture worth little more than a week's rental, receives 5/3; another house lets for 6/6, but the farmer receives 30/-, and in ten selected houses the weekly aggregate rental which was paid to the landlord was 36/3, whilst the amount the houses produced was £5 17s 0d. With respect to these tenement houses, bye-laws for their regulation were drawn up last year and approved by the Corporation, they afterwards received the approval of the Local Government Board, and steps are now being taken to register these houses. Since the rentals paid by the tenants are on the whole sufficient to justify the expectation of proper accommodation, the persons who sublet these houses will be required to make them in every respect suitable for habitation. The only justification I have for referring at length to the above matters, is to attempt to show the necessity which exists for providing persons who are incapable of helping themselves with reasonable accommodation at a reasonable charge, instead of allowing them to exist under conditions harmful, both physically and morally, to themselves, and liable at any time to develop conditions which may menace the health of the general community, and at the same time to point out the advantages which will accrue in the future by this policy of gradual demolition with rearrangement of site. The housing of the working classes is, at the present time, one of the most pressing social and sanitary problems of the day, and I am of opinion that laxity in the past in respect to Sanitary requirements, the words being used in their broadest sense, and a want of control on overcrowding are responsible for this; sites in the first place have been allowed to become overcrowded with houses, and in their turn the houses have followed suit, four roomed houses have been divided into two roomed tenements, which have been further subdivided into one room tenements, afterwards, rooms are found occupied in common, and lastly the bed-sharing system, of continual occupation of a bed both by night and day by different persons whose occupations require them to be at work one at night time and the other in the day is the result. Such an extreme condition as the last is, of course, rarely found, but it is not unknown in London—before a town arrives at the latter stage and when little vacant land within its boundaries is left, the re-housing of such an over-crowded population in a satisfactory manner becomes a problem almost beyond human solution. The state of affairs at the present time in Derby is such that this housing question is one which is capable of easy solution, and further a little anticipation and an intelligent appreciation of the results of a former *laisser faire* policy in other towns can remove all risk of its ever becoming an acute question. The land in Derby is nearly all freehold, it is fairly cheap, private enterprise has therefore built, and the extension has been general on almost every side of the town, the houses have been built on sound lines, with good open backs, and are roomy, the building has kept pace with the increased population, and rents are reasonable. High rents are a result of overcrowding and I wish to emphasise the point, overcrowding is not a result of high rents, but the reverse holds. When houses are scarce there is a rush after a vacant place and it goes to the highest bidder, the Key-money System which tenants themselves introduced mostly to gain possession of houses in London, is now being used by some landlords in such a manner that had the tenants foreseen the ultimate result I venture to opine there would have been some hesitation before introducing it; one result of high rents is a diminution of the money for weekly necessities, and an impoverished household. I have shown rentals to be under one shilling per room, and this bears out the census return that overcrowding is not rife, *the slums are localised in extent and do not cover a very considerable area compared with the total acreage of the town.* Another point, warehouses do not play an important part in the existence of the town, which is a railway centre, and buildings, and storage accommodation for the railway have been found on the outskirts, no great amount of demolition of cottage property for warehouse room has ever taken place, which so accentuates the overcrowding in some towns. Remove such slums as exist gradually, by acquiring possession of the insanitary courts, as in the two schemes which have been carried out, and either build on the land, or else encourage building upon it for the working classes by letting it at reasonable rates, with the proviso that it shall not be used for any other purpose; this will effectually prevent the future encroachment of warehouses and other buildings. Further, jealously guard against any overcrowding in other parts of the town, and whichever be true that slums create poor people, or that poor people create slums, prevent the future formation of such places by encouraging the Health Department in an energetic policy of upholding the requirements of the Public Health Act. Whatever may be the case in other towns I am convinced that the powers contained in the above Act and the Housing of the Working Classes Act, 1890, are sufficient to deal effectually with the problem on the above lines in Derby, and the decentralization which has so far been the feature of the building operations should still proceed now that the Corporation have acquired possession of the Tramways, if suitable extensions, and the imposition of fares, which encourage rather than detract from, the working man desiring to have his house in the suburbs, ensue.

Mortality from Special Diseases.—Table F shows the number of deaths from the principal diseases for the past ten years, as well as the average for the decennium, and the following table shows the excess, or diminution of certain diseases compared with the decennial averages :—

Cause of Death.	Diminution in 1899.	Excess in 1899.
Measles	10	—
Scarlet Fever	—	13
Influenza	—	39
Whooping Cough	25	—
Diphtheria	4	—
Enteric Fever	3	—
Diarrhœal Diseases	—	30
Phthisis	4	—
Prematurity	—	8
Heart Diseases	—	21
Bronchitis	25	—
Pneumonia	—	26
Other Respiratory Diseases	5	—
Apoplexy and Paralysis	—	21
Urinary Diseases	—	5

Uncertified Deaths.—It is extremely satisfactory to note that all deaths were certified either by medical practitioners or the coroner. There were 157 inquests held during the year.

TABLE E.—DEATHS OCCURRING IN THE COUNTY BOROUGH OF DERBY FROM ALL CAUSES AT VARIOUS AGE PERIODS DURING THE YEAR 1899.

DISEASES.	AGES IN YEARS.																						Total.					
	0 to 1	1 to 2	2 to 3	3 to 4	4 to 5	5 to 10	10 to 15	15 to 20	20 to 25	25 to 30	30 to 35	35 to 40	40 to 45	45 to 50	50 to 55	55 to 60	60 to 65	65 to 70	70 to 75	75 to 80	80 to 85	85 and upwards		1 to 5	5 to 20	20 to 40	40 to 60	60 and upwards
I. ZYMOTIC DISEASES ...	96	33	6	14	7	17	4	5	6	3	5	7	6	4	9	7	4	10	5	5	3	1	257	156	26	21	26	28
II. PARASITIC DISEASES ...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	...	...	...	...
III. DIETIC DISEASES	1	...	...	...	...	...	...	...	...	...	2	2	2	...	...	4	2	...	...	...	...	...	13	1	...	4	6	2
IV. CONSTITUTIONAL DIS. ...	26	6	1	6	1	5	4	12	13	19	24	15	16	18	31	29	16	16	7	6	1	...	272	40	21	71	94	46
V. DEVELOPMENTAL DIS. ...	87	...	..	...	...	1	...	...	...	...	...	...	...	...	...	..	2	3	23	26	26	20	188	87	1	...	..	100
VI. LOCAL DISEASES	186	52	21	8	10	25	13	9	25	15	24	57	42	46	48	66	71	77	68	51	31	8	953	277	47	121	202	306
VII. VIOLENCE	8	2	1	1	4	2	3	4	9	2	4	3	4	3	6	4	4	1	3	1	...	...	69	16	9	18	17	9
VIII. ILL-DEFINED CAUSES ...	83	4	1	...	1	...	...	...	1	1	2	...	...	1	...	2	2	2	...	2	...	1	103	89	...	4	3	7
ALL CAUSES ...	488	97	30	29	23	50	24	30	54	40	61	84	70	72	94	112	101	109	106	91	61	30	1856	667	104	239	348	498
I. Zymotic Diseases.																												
1. MIASMATIC DISEASES.																												
Small Pox	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	..	...	...	...
Measles	5	11	...	5	2	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	24	23	1	...	...	...
Scarlet Fever	1	3	4	3	2	11	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	25	13	11	1	...	...
Influenza	6	3	...	2	1	1	1	2	2	2	4	3	5	4	5	5	2	6	5	3	1	1	64	12	4	11	19	18
Whooping Cough	2	5	1	...	1	...	...	...	...	...	...	...	...	...	..	...	...	...	...	...	...	...	9	9	...	...	...	...
Diphtheria	...	1	...	4	...	3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	8	5	3	...	...	...
Enteric Fever	...	...	...	...	...	...	2	3	2	1	1	4	...	...	1	...	1	...	..	...	...	...	15	...	5	8	1	1
2. DIARRHŒAL DISEASES:																												
Diarrhœa, Dysentery	75	9	...	...	...	...	1	...	...	...	...	...	...	...	3	1	1	3	...	1	1	...	95	84	1	...	4	6
3. VENEREAL DISEASES:—																												
Syphilis	5	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	7	7	...	...	...	...
4. SEPTIC DISEASES—																												
Erysipelas	...	...	...	...	...	...	...	...	...	...	...	...	...	...	..	...	...	1	...	1	1	...	3	...	...	...	...	3
Pyæmia Septicæmia	2	...	...	...	1	1	...	...	1	...	...	...	...	...	...	1	...	...	...	...	...	...	6	3	1	1	1	...
Puerperal Fever	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	1	...	...	...	1	...

DEATHS occurring in the County Borough of Derby, from all causes at various age periods during the Year 1899.

DISEASES.	AGES IN YEARS.																						Total.	1 to 5	5 to 20	20 to 40	40 to 60	60 and upwards.
	0 to 1	1 to 2	2 to 3	3 to 4	4 to 5	5 to 10	10 to 15	15 to 20	20 to 25	25 to 30	30 to 35	35 to 40	40 to 45	45 to 50	50 to 55	55 to 60	60 to 65	65 to 70	70 to 75	75 to 80	80 to 85	85 and upwards						
II. Parasitic Diseases																												
Thrush	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	...	...	...	...
III. Dietic Diseases.																												
Starvation, Want Breast Milk...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	...	...	...	...
Intem. Chr. Alcoholism ...	...	...	...	...	...	...	...	...	...	...	1	1	2	...	...	3	2	...	...	...	...	...	9	...	...	2	5	2
Delirium Tremens..	...	...	...	...	...	...	...	...	...	...	1	1	...	...	...	1	...	...	...	...	...	...	3	...	...	2	1	...
IV. Constitutional Diseases.																												
Rheum. Fev., Rheum. Heart...	...	...	...	...	...	...	...	2	1	...	...	...	...	...	1	...	...	...	...	...	...	...	4	...	2	1	1	...
Rheumatism	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	2	...	1	...	...	...	...	4	...	1	...	2	1
Gout	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	1	...	...	...	...	1
Rickets	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	...	...	...	...
Cancer	...	...	...	...	...	...	...	...	...	...	3	1	2	6	14	15	9	6	5	4	1	...	66	...	...	4	37	25
Tabes Mesenterica	13	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	15	15	...	...	...	...
Tuber. Mening. (Hydroceph.)	4	2	...	3	1	2	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	13	10	2	...	1	...
Phthisis	...	1	1	1	...	1	...	8	10	16	20	13	14	9	12	9	3	1	...	...	...	...	119	3	9	59	46	2
Other forms of Tuberc. Scrofula	7	1	...	2	...	1	3	2	...	...	1	...	...	...	...	...	...	1	...	...	...	...	18	10	6	1	...	1
Anæmia, Chlorosis, Leucocyth:	...	...	...	...	...	1	...	...	...	...	...	1	...	1	1	1	2	...	1	...	...	...	8	...	1	1	2	4
Diabetes Mellitus	...	...	...	...	...	...	...	...	2	3	...	...	...	1	3	2	2	5	1	1	...	...	20	...	...	5	5	10
Other Constitutional Diseases...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	...	...	...	...	3	1	...	...	...	2
V. Developmental Diseases.																												
Premature Birth	71	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	71	71	...	...	...	...
Atelectasis	3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3	3	...	...	...	...
Cyanosis...	4	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4	4	...	...	...	...
Spina Bifida	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	...	...	...	...
Imperforate Anus	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	...	...	...	...
Other Congenital Defects ...	7	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	8	7	1	...	...	...
Old Age...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	3	23	26	26	20	100	...	...	...	...	100
VI. Local Diseases.																												
1. DIS. OF NERV. SYSTEM																												
Inflam. of Brain or its Mem. ..	8	5	1	...	1	3	2	1	...	1	...	1	...	...	...	...	...	...	...	...	...	...	23	15	6	2	...	...
Apoplexy	...	...	...	...	...	...	...	...	...	...	4	2	3	2	3	3	7	5	7	5	3	3	47	...	...	6	11	30
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28
Softening of the Brain	...	...	...	...	...	...	...	...	...	...	...	...	.	...	3	1	3	5	2	1	1	...	16	...	...	...	4	12
Hemiplegia, Brain Paralysis	...	...	...	...	...	...	...	...	...	...	...	1	2	1	...	2	4	6	4	2	...	...	22	...	...	1	5	16
Paralysis Agitans	...	...	..	...	...	...	...	...	...	...	...	..	...	...	...	...	...	...	...	1	...	...	1	...	...	...	...	1
Insanity, Gen. Par. of Insane	...	...	...	...	...	...	...	...	...	...	...	3	1	1	...	...	...	...	...	...	...	...	5	...	...	3	2	...
Epilepsy	...	...	...	...	...	1	1	...	...	1	...	1	1	2	2	3	...	...	...	...	...	..	12	...	2	2	8	...
Convulsions	80	14	4	1	1	4	...	...	...	...	...	...	...	...	...	...	...	..	..	...	...	...	104	100	4	...	..	...
Laryngismus Stridulus	...	...	1	1	...	1	...	...	..	...	...	...	...	...	...	...	...	...	...	...	...	...	3	2	1	...	..	...
Paraplegia, Disease of Spinal Cord	...	...	...	...	...	...	...	...	...	...	...	1	...	...	1	2	...	1	1	...	...	...	6	...	...	1	3	2
Other Diseases of Nervous Sys.	2	...	1	1	...	...	...	...	...	1	2	2	1	2	1	1	1	1	...	..	2	..	18	4	...	5	5	4
2. ORGANS OF SPECIAL SENSE (Diseases of)																												
Otitis, Oto rhœa	...	...	...	...	...	1	1	...	1	...	...	...	...	...	...	...	...	...	...	..	...	...	3	...	2	1	...	...
Epistaxis and Diseases of Nose	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	..	...	1	...	...	...	1	...	...	...	...	1
Ophthalmia and Diseases of Eye	..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	1	...	...	...	1	...
3. CIRCULATORY SYSTEM (Diseases of)																												
Endocarditis (Acute)	...	...	...	...	...	...	...	...	..	..	...	...	...	...	...	...	...	1	...	...	...	...	1	...	...	...	...	1
Valvular Disease	...	...	...	...	1	1	...	...	...	...	3	4	1	...	...	1	2	...	1	..	1	...	15	1	1	7	2	4
Pericarditis	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1	...	...	...
Angina Pectoris	...	...	...	...	...	...	...	...	...	...	..	..	...	...	...	...	...	1	...	...	..	...	1	...	...	...	...	1
Syncope	4	...	...	1	...	...	...	...	...	1	...	1	4	3	1	6	5	2	6	1	4	1	40	5	...	2	14	19
Aneurism	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	...	...	...	...	...	...	...	2	...	...	...	2	...
Senile Gangrene	...	...	...	...	...	...	..	...	...	...	...	...	...	...	...	1	1	...	2	...	1	...	5	..	...	...	1	4
Heart Disease	...	...	...	...	...	...	2	1	8	2	3	11	10	5	9	12	18	18	9	13	5	3	129	...	3	24	36	66
4. RESPIRATORY SYSTEM (Diseases of)																												
Laryngitis	...	...	1	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	2	1	...	1	...	...
Croup	...	1	2	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4	4	...	...	...	...
Other Diseases of Larynx and Trachea	...	...	...	...	1	...	...	...	...	...	..	...	...	...	...	...	...	...	...	...	...	...	1	1	...	...	...	...
Emphysema, Asthma	...	...	...	...	...	...	..	...	...	...	1	1	1	..	...	2	...	2	2	...	...	...	9	...	...	2	3	4
Bronchitis	18	12	4	1	1	3	...	...	...	...	1	2	3	7	5	10	14	11	20	18	11	...	141	36	3	3	25	74
Pneumonia	14	9	4	1	3	5	1	4	9	...	4	10	3	10	6	4	6	5	3	2	1	...	104	31	10	23	23	17
Pleurisy	...	...	...	...	...	...	...	...	...	...	...	...	2	2	...	...	1	2	...	...	...	...	7	...	...	...	4	3
Other Dis. of Respiratory Sys.	3	...	2	...	...	2	...	...	1	...	...	...	1	...	1	1	...	...	...	...	...	...	11	5	2	1	3	...
5. DIS. OF DIGESTIVE SYSTEM.																												
Dentition	8	...	..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	8	8	...	...	...	...

DEATHS occurring in the County Borough of Derby, from all causes at various age periods during the Year 1899.

DISEASES.	AGES IN YEARS.																						Total.					
	0 to 1	1 to 2	2 to 3	3 to 4	4 to 5	5 to 10	10 to 15	15 to 20	20 to 25	25 to 30	30 to 35	35 to 40	40 to 45	45 to 50	50 to 55	55 to 60	60 to 65	65 to 70	70 to 75	75 to 80	80 to 85	85 and upward		1 to 5	5 to 20	20 to 40	40 to 60	60 and upwards.
Dyspepsia	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1	...	...	...	...	1
Hæmatemesis	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	1	...	...	...	...	1
Diseases of Stomach	2	...	...	...	...	...	...	...	...	...	...	2	2	...	...	...	...	2	...	1	...	...	9	2	...	2	2	3
Enteritis...	10	...	1	...	...	...	...	...	1	...	...	...	...	...	...	...	1	...	...	...	...	...	13	11	...	1	...	1
Gastro. Enteritis	31	8	...	...	...	1	...	...	1	...	...	...	1	...	...	1	1	2	2	...	...	...	48	39	1	1	2	5
Obstruction of Intestine	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	1	...	1	1	...	4	...	...	...	1	3
Strict. or Strang. of Intestine	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1	...	...	...
Intussusception of Intestine	2	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3	3	...	...	...	...
Hernia	...	1	...	...	...	...	...	...	...	...	1	1	...	1	3	1	1	1	1	1	...	...	12	1	...	2	5	4
Peritonitis	...	...	...	...	...	1	1	...	...	1	...	1	...	...	2	...	...	2	...	...	...	...	8	...	2	2	2	2
Ascites	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	1	...	...	...	1	...
Cirrhosis of Liver	...	...	...	...	...	...	...	...	...	...	...	2	1	2	5	5	2	1	...	...	...	...	18	...	...	2	13	3
Other Diseases of Liver	...	...	...	...	...	...	...	...	...	...	...	1	1	...	...	1	...	...	...	...	...	...	3	...	...	1	2	...
Other Diseases of Digest. Syst.	3	...	...	...	...	1	1	...	...	...	...	...	...	2	1	2	1	...	1	...	...	...	12	3	2	...	5	2
6. DISEASES OF URINARY SYSTEM.																												
Acute Nephritis	...	...	...	...	...	1	1	...	...	...	1	4	...	...	...	1	...	...	1	1	...	...	10	...	2	5	1	2
Bright's Disease	...	...	...	...	...	...	...	...	...	1	...	2	...	...	...	2	2	5	1	1	...	...	14	...	...	3	2	9
Uræmia	...	...	...	...	...	...	1	...	...	...	...	...	...	1	2	...	...	...	1	...	...	...	5	...	1	...	3	1
Calculus	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	1	...	...	...	1	...
Hæmaturia	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	1	...	...	...	...	1
Dis. of Bladder and Prostate	...	...	...	...	...	...	...	...	...	...	1	...	...	1	...	...	...	2	2	1	...	1	8	...	...	1	1	6
Other Diseases of Urinary Syst.	...	...	...	1	...	...	...	...	...	1	1	...	...	...	...	...	1	...	1	1	...	...	6	1	...	2	...	3
7. DIS. OF REPRODUCTIVE SYSTEM.																												
A. Generative Organs, Dis. of	...	...	...	...	...	...	...	...	1	...	...	...	1	...	...	...	...	...	...	...	...	...	2	...	...	1	1	...
Ovarian Diseases	...	...	...	...	...	...	...	...	2	1	...	...	1	...	1	...	...	...	...	...	...	...	5	...	...	3	2	...
Diseases of Uterus and Vagina	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	1	...	...	...	...	...	...	3	...	...	...	3	...
Disorder of Menstruation	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1	...	...	...
Pelvic Abscess	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	1	...	...	...	...	...	...	2	...	...	1	1	...
B. Parturition, Diseases of	...	...	...	...	...	...	...	...	...	1	1	...	...	...	...	...	...	...	...	...	...	...	2	...	...	2	...	...
Abortion, Miscarriage	...	...	...	...	...	...	...	...	...	...	...	2	1	...	...	...	...	...	...	...	...	...	3	...	...	2	1	...
Puerperal Convulsions	...	...	...	...	...	...	...	...	...	1	...	...	1	...	...	...	...	...	...	...	...	...	1	...	...	1	...	...
Placenta Prævia, Flooding	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	1	...	...
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28
8. DISEASES OF LOCOMOTOR SYSTEM.																												
Caries, Necrosis	...	...	...	...	...	...	..	1	...	...	...	1	...	...	...	1	...	...	...	...	...	...	3	...	1	1	1	...
Arthritis, Osteitis, Periostitis ...	...	...	...	...	1	...	...	...	..	1	...	...	...	...	...	..	...	...	...	...	...	...	2	1	...	1	...	...
Other Diseases of Locomotor System	...	...	...	...	...	...	1	...	...	..	1	..	...	...	...	...	...	...	...	...	...	...	2	...	1	1	...	...
9. DIS. OF INTEGUMENT. SYSTEM.																												
Phlegmon, Cellulitis	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	...	...	...	...
Ulcer, Bedsore	..	...	...	...	..	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	1	...	...	1	...	...
Eczema	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	...	...	...	...
Pemphigus	1	...	...	...	..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	...	...	...	...
VII. Violence.																												
1. ACCIDENT OR NEGLIGENCE																												
Fractures, Contusions	...	...	...	...	...	2	...	2	2	...	1	1	.	1	1	...	1	...	...	...	...	...	11	...	4	4	2	1
Burn, Scald	1	1	...	1	3	...	...	...	...	1	1	...	...	...	...	...	...	...	1	...	...	...	9	6	...	2	...	1
Poison	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	1	...	...	...	1	...
Drowning	...	...	1	...	...	...	1	1	1	1	...	...	1	...	...	...	...	..	...	...	...	...	6	1	2	2	1	...
Suffocation	7	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	8	8	...	...	...	...
Otherwise	...	1	...	...	...	...	2	1	4	...	...	...	1	1	3	2	..	1	2	1	...	...	19	1	3	4	5	6
2. SUICIDE.																												
Cut, Stab	...	...	...	...	...	...	...	...	...	...	...	1	...	...	1	...	...	..	...	...	...	...	2	...	...	1	1	...
Poison	..	...	...	...	..	...	...	...	1	...	...	...	...	...	...	1	...	...	...	...	...	...	2	...	...	1	1	...
Drowning	...	...	...	...	..	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	1	...	...	1	...	.
Hanging	...	...	...	...	...	...	...	...	1	...	1	1	1	1	1	1	3	...	...	...	...	...	10	...	...	3	6	1
VIII. Ill-defined and not specified Causes.																												
Debility, Atrophy, Inanition ...	79	3	1	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	85	84	...	..	.	1
Tumour	...	...	...	...	...	...	...	. .	...	...	...	...	...	1	...	1	...	..	...	...	...	...	2	...	...	...	2	...
Abscess	...	...	...	...	...	...	...	...	...	1	1	...	...	...	...	...	...	...	...	...	...	...	2	...	...	2	...	...
Hæmorrhage	...	...	...	..	...	...	...	...	..	...	...	...	...	...	...	...	1	...	...	...	...	...	1	...	...	...	...	1
Other Ill-defined and not specified causes...	4	1	...	...	...	...	...	...	1	...	1	...	...	...	...	1	1	2	...	2	...	...	13	5	...	2	1	5

TABLE **F.**—Causes of Deaths registered in each of the ten years, 1889—1898, in 1899, and the average decennial numbers.

	1889	1890	1891	1892	1893	1894	1895	1896	1897	1898	Average.	1899
ALL CAUSES ...	1614	1874	1792	1765	1772	1490	1698	1620	1720	1830	1691	1856
Small Pox	...	1	...	...	7	.	8	...	...	...	1.6	...
Measles	4	119	24	20	15	59	6	32	17	53	34.9	24
Scarlet Fever	19	11	9	7	14	15	8	11	9	20	12.3	25
Influenza	...	4	63	26	42	16	30	17	27	26	25.1	64
Typhus Fever	...	...	...	...	...	..	...	...	...	...	...	...
Whooping Cough ...	9	62	38	59	44	15	22	47	23	28	34.7	9
Diphtheria	19	20	17	20	6	5	6	11	9	9	12.2	8
Ill-defined Fever .	8	...	1	..	. .	...	...	...	...	...	...	...
Enteric Fever	11	17	11	8	21	26	18	20	26	28	18.6	15
Simple Cholera ...	...	...	...	...	1	...	1	...	3	...	...	...
Diarrhœa, Dysentery ...	63	30	26	60	83	31	110	63	89	97	65.2	95
Venereal Affections ...	4	6	7	8	9	4	6	3	4	6	5.7	7
Erysipelas	8	8	7	6	3	2	1	1	2	3	4.1	3
Pyæmia and Septicæmia	4	4	3	2	4	2	...	3	6	4	3.2	6
Puerperal Fever ...	1	...	6	5	6	3	2	3	2	8	3.6	1
Other Zymotics ..	...	...	...	...	...	...	...	1	..	...	..	...
Parasitic Diseases ...	...	1	...	...	1	...	...	...	...	2	.4	1
Dietic Diseases, Intemp.	8	5	5	5	3	5	4	5	5	3	4.8	13
Rheum. Fever & Rheum of Heart	7	8	2	8	6	6	3	4	2	5	5.1	4
Rheumatism	9	5	1	5	5	4	4	3	3	4	4.3	4
Cancer	51	53	63	46	67	57	58	61	91	79	62.6	66
Tabes Mesenterica ...	20	25	15	22	25	19	31	23	21	12	21.3	15
Tubercular Meningitis	10	13	11	10	11	8	8	10	15	14	.11.	13
Phthisis	99	143	139	140	132	103	105	137	99	133	123.	119
Scrofula...	20	25	16	23	17	20	19	16	15	22	19.3	18
Other Constitutional Diseases	98	118	109	137	116	88	126	104	116	87	109.9	33
Premature Birth ...	65	44	42	50	54	39	51	51	54	59	50.9	71
Devel. Dis. & Cong. Def.	4	...	3		2	4	8	7	7	7	36.6	17
Old Age	131	132	123	78	123	106	113	107	116	104	113.3	100
Apoplexy and Paralysis	37	34	33	39	36	39	34	51	53	87	44.3	69
Epilepsy	9	22	17	12	9	9	8	11	7	7	11.1	12
Convulsions	93	85	96	124	104	73	100	86	62	88	91.1	104
Brain and Nerv. Dis. (other)	112	106	125	108	100	106	127	92	104	67	104.7	72
Organs, Special Sense Dis of	...	...	...	...	...	...	...	1	...	4	...	5
Heart Diseases... ...	132	153	164	139	142	138	170	163	173	184	155.8	194
Croup	4	8	12	8	8	5	4	5	7	1	6.2	4
Bronchitis	193	176	212	179	175	140	155	135	140	145	165.0	141
Pneumonia	60	91	81	79	81	77	71	76	81	86	78.3	104
Lung and Respiratory Dis. (other)	28	59	65	37	25	32	28	29	28	25	35.6	30
Teething	32	26	7	24	36	19	12	6	30	18	21.	8
Quinsy	...	...	. .	...	..	...	...	...	...	...	...	...
Digestive Org. Disease	108	127	118	117	101	96	112	102	137	116	113.4	134
Urinary Org. Disease ...	41	45	26	49	38	32	38	44	51	35	39.9	45
Parturition	9	10	13	15	12	8	10	9	6	3	9.5	2
Generative Org. Disease	5	9	5	8	2	4	3	6	5	11	5.8	18
Other Local Diseases ...	14	17	18	8	18	11	8	8	12	16	13.0	11
Accident	39	41	37	58	41	49	43	42	46	48	44.	54
Homicide	1	...	3	...	...	...	...	3	...	...	...	...
Suicide	11	5	1	4	10	14	10	5	2	10	7.2	15
Execution	1	...	...	...	...	...	...	1	...	1	...	...
Other Causes	13	6	18	12	17	1	17	5	15	65	16.9	103

Notification of Infectious Diseases.

The total number of cases of infectious diseases notified under the Derby Improvement Act of 1879, was 1094, as against 720 in 1898, and 618 in 1897.

The highest and lowest weekly incidences were as follows :—

Week ending.	1899.	Fresh Cases.
October 8th ...	highest number ...	28
July 1st	lowest number ...	1

The number of cases notified in 1899 was considerably greater than in previous years, the reasons for this being discussed later. The following table is useful for comparative purposes :—

It will be noticed from table G that scarlet fever was by far the most prevalent of the infectious diseases, and that the number of cases of diphtheria and enteric fever was also somewhat above the average. The succeeding table shows that scarlet fever was least prevalent during the third quarter of the year, and enteric fever most prevalent during the fourth quarter. The rate per 1,000 of the population of notified cases was 10.3, as compared with 6.8, the mean rate for the previous ten years; and the mean weekly incidence of cases was 12.3 above the average for the same decennial period.

Cases notified during 1899.

Quarters.	Totals.	Small Pox.	Scarlet Fever.	Diphtheria	Typhus Fever.	Enteric Fever.	Relapsing Fever.	Puerperal Fever.
First ...	287	...	227	18	...	39	...	3
Second...	290	...	256	17	..	16	...	1
Third ...	202	...	162	11	...	26	...	3
Fourth ...	315	...	240	14	...	60	...	1
Year ...	1094	...	885	60	...	141	...	8

Table **G.**—Number of cases of Infectious Disease notified in the Borough of Derby for 1899, and for each year since 1880.

Diseases.	1880	1881	1882	1883	1884	1885	1886	1887	1888	1889	1890	1891	1892	1893	1894	1895	1896	1897	1898	1899
Small Pox	...	46	15	2	7	...	...	...	20	...	5	...	11	52	3	94	1	1	...	...
Scarlet Fever	372	423	770	506	389	232	167	64	756	775	346	318	470	501	513	364	427	432	481	885
Diphtheria	...	6	10	8	...	1	6	27	23	46	81	66	67	50	46	43	45	57	74	60
Enteric & Contd. Fever	144	95	113	51	344	57	162	105	163	99	64	66	55	111	104	99	104	125	159	141
Typhus Fever... ...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Cholera	...	...	...	...	...	...	...	...	...	...	...	...	...	2	...	...	...	...	...	...
Puerperal Fever ...	...	6	6	7	11	2	1	1	3	5	1	8	9	11	7	10	3	3	6	8
Totals	516	577	914	574	751	292	336	197	965	925	497	458	612	727	673	610	580	618	720	1094

In addition to the above, the following cases of measles were also notified during short periods of voluntary notification:—1884, 513 cases; 1887, 874 cases; 1888, 33 cases.

Preventive measures adopted against the spread of Infectious Diseases.—The following is a summary of the work done in this direction.

Cases isolated :—	QUARTERS.				
	First	Second	Third	Fourth	Totals.
Scarlet Fever in the Borough Sanatorium	116	119	132	130	497
,, ,, Royal Infirmary	4	7	...	...	11
Diphtheria ,, ,, ,,	6	10	6	9	31
Enteric Fever ,, ,, ,,	34	11	21	44	110
Totals	160	147	159	183	649

Cases desiring removal, but for whom no accommodation could be found :—					
Scarlet Fever	49	61	8	24	142
Enteric Fever	...	1	...	3	4
Totals	49	62	8	27	146

Cases whose removal was delayed owing to want of accommodation :—	QUARTERS.				
	First.	Second.	Third.	Fourth.	Totals.
Scarlet Fever	56	78	43	59	236
Enteric Fever	8	1	1	19	29
Totals	64	79	44	78	265

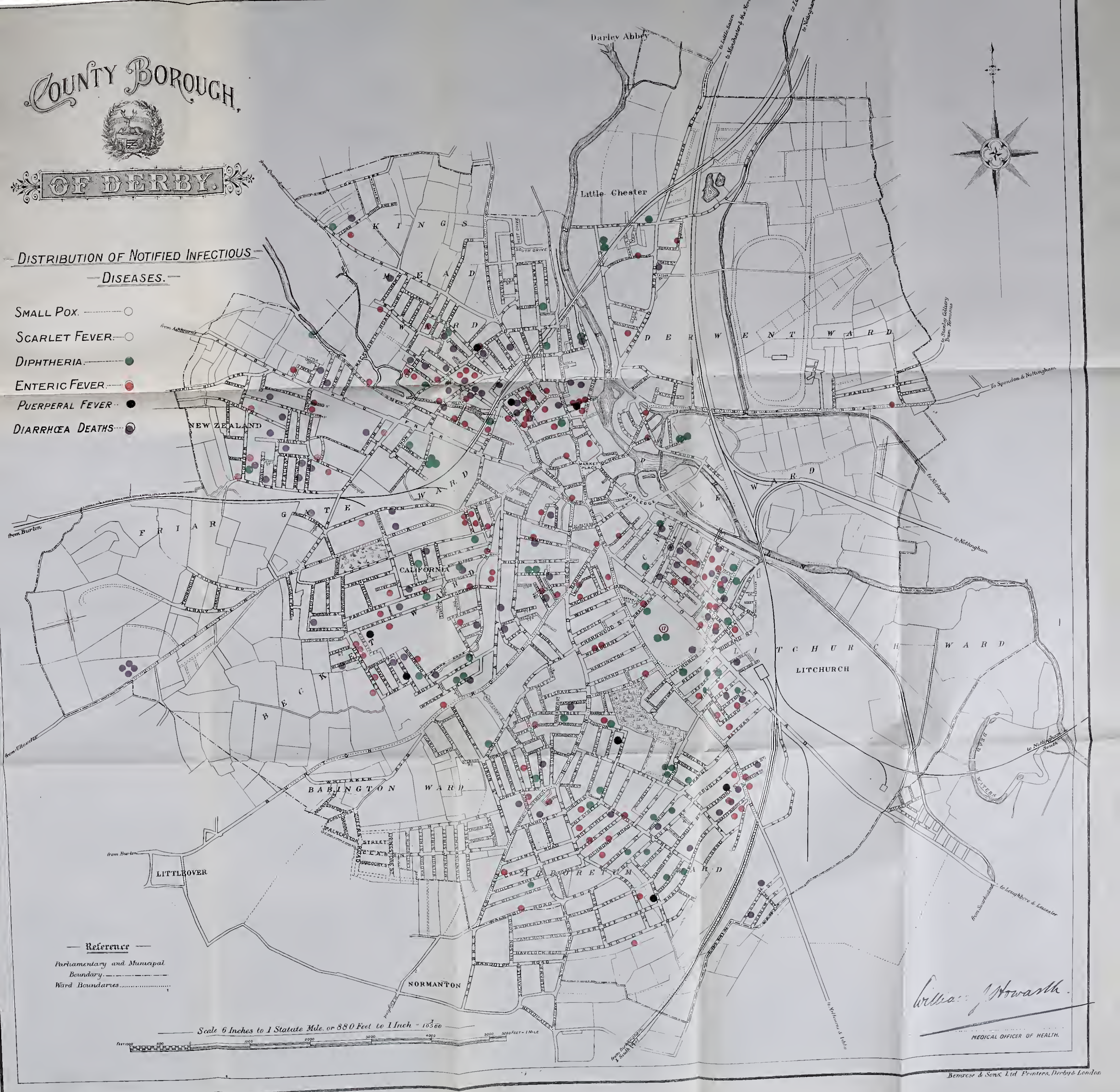
Inspectors' visits to Infectious cases numbered	1131	983	778	1106	3998

The Borough Isolation Hospital.—During the past year, 497 patients were treated at the Isolation Hospital. These were all cases of Scarlet Fever, and if compared with the 885 cases of this disease notified, and deducting 11 treated in the wards of the Royal Infirmary, it will be seen that 57.5 per cent. of all Scarlet Fever notifications were isolated. This is a smaller percentage than for the past few years, though the aggregate number treated is considerably greater than in any previous year. The administration of the Hospital under this protracted period of pressure has been a matter of considerable difficulty, and the provision of increased accommodation for the nursing staff is a matter which ought to receive your earliest attention. I must here express my indebtedness to Sister Mould, and the whole of the staff under her, for the energetic and cheerful manner in which they have carried on their work, and those intimately associated with the administration of the Institution are well aware that the extra work which has been thrown upon it during the past twelve months could not have been possible without the loyal assistance and co-operation of the resident staff.

The following Table shows the cases notified and isolated both at the Royal Infirmary, and at the Borough Hospital since the establishment of the latter.

YEAR.		1890	1891	1892	1893	1894	1895	1896	1897	1898	1899
Cases notified		346	318	470	501	513	364	427	432	481	885
Isolated	Borough Sanatorium	80	111	168	58	200	167	306	338	324	497
	Royal Infirmary ...	113	82	125	137	25	2	...	...	4	11
Percentage of Cases Isolated		55	62	62	38	43	46	71	78	68	57·5

The average length of stay in Hospital was 52.6 days; nine patients were under treatment owing to complications, for more than 100 days, the longest period being 122. The deaths numbered 9, which gives a satisfactory case mortality of 1.8 per cent., as compared with 16 deaths among the 388 patients treated outside the Hospital, which represents a case mortality of 4.1 per cent. In addition to the necessity for increased accommodation for the resident staff, I must call attention to the inadequacy of the temporary wooden erection for the treatment of acute cases; the temperature of this building is most difficult to regulate, and extremes of temperature in the 24 hours are common. Such buildings are difficult to keep cool in summer, and warm at night, and during the winter months, arrangements of a temporary character were made, whereby one of the men working at the destructor attended to the firing at 2 a.m. Constant repairs to keep out wind and rain are required, and since no provision is made for the separation of the sexes, it is evident



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its use is limited: a permanent pavilion in keeping with the rest of the Hospital should be substituted.

It has been customary to isolate any cases of Small Pox which have arisen in the town on this site, and during the year, five beds have been reserved on one side of the Isolation Pavilion for such cases; fortunately they were never brought into use. Your late Medical Officer who on several occasions had to deal with Small-Pox on this site, frequently drew attention to the risks which were entailed, especially considering that only the same administrative block and laundry were available, and considering the present state of vaccination in this town, I have to recommend the provision of a self-contained Hospital erected on a separate site for the treatment of this disease. (During the present year, a special detailed report referring to the above matters has been presented to the Sanitary Committee by the Borough Engineer, and Medical Officer of Health, and certain proposals on the subject are to be recommended to the Council for adoption).

Mortality from Zymotic Diseases:—

Zymotic Mortality during the past five years.

Year.	1895	1896	1897	1898	1899.		
					Derby.	England and Wales.	33 Great Towns.
Rate per 1,000	1.7	1.8	1.6	2.24	1.6	2.21	2.81

The total deaths from the seven principal Zymotic diseases during 1899 numbered 176, of which 3 were those of strangers who were brought into the town for treatment. This number compares with 235 in the previous year, and 173 and 184 in 1897 and 1896 respectively. The mortality is equal to a rate of 1.6 per 1,000, and compares favourably with previous years; it is also 6 per 1,000 less than the rate for the whole of England and Wales, and 1.2 per 1,000 less than the rate which prevailed in the 33 great towns.

Small Pox:—

Mortality from Small Pox during the past five years.

Year.	Ten Years' Average	1895	1896	1897	1898	1899.		
						Derby.	England and Wales.	33 Great Towns.
Rate per 1,000	0.02	0.08	0	0	0	0	0.01	0.01

No case of Small Pox was reported in the Borough during 1899, and no death from the disease has been recorded since 1895, and no case has been notified since 1897.

Vaccination.—The following Table gives particulars with respect to the primary vaccination of infants in the Borough, from returns kindly supplied by the Clerk to the Guardians.

TABLE **H.**—*Showing the percentage of successful Vaccinations in the Borough of Derby for the* 11 *years* 1873-83, *and for each year from* 1884-1899.

YEAR	Births.	Died unvaccinated.	Insusceptible and postponed	Total available Children.	Successfully Vaccinated.	Percentage of Children Vaccinated.
11 Years 1873-83	31,011	3,767	180	27,244	24,723	90.7
1884	2,882	356	7	2,526	1,673	66.
1885	2,904	337	44	2 567	2,151	83.
1886	2,896	328	39	2,568	2,363	92.
1887	2,673	281	30	2,392	2,209	92.
1888	2,720	306	47	2,414	2,186	90.
1889	2,707	314	12	2,393	2,032	84.
1890	2,597	289	4	2,308	1,893	82.
1891	2,914	368	5	2,546	1,681	66.
1892	3,015	428	5	2,587	1,134	43.
1893	3,142	420	4	2,722	737	27.
1894	2,934	345	2	2,589	453	17.
1895	2,941	454	4	2,487	283	11.
1896	2,876	406	3	2,470	210	8.
1897	2,826	430	1	2,396	145	6.
1898	2,869	389	0	2,480	330	13.
1899	3,000	475	292	2,525	784	31.

Mr. W. H. Whiston informs me that the number of vaccination certificates granted under the Vaccination Act during the year 1899 was 49.

Scarlet Fever:—

Mortality from Scarlet Fever during the past five years.

Year.	Ten Years' Average	1895	1896	1897	1898	1899.		
						Derby.	England and Wales.	33 Great Towns
Rate per 1,000	0.13	0.08	0.10	0.08	0.19	0.24	0.12	0.13

This disease was marked by undue prevalency in the year 1899, and not since 1888 and 1889 has the disease existed to such an extent. During the latter two years there were over 750 cases notified in each year (see Table G). The average annual number of cases notified for the past decennium has been 461, but in the year under review no fewer than 885 cases were reported. There were 25 deaths among these cases, giving a mortality of .24 per 1,000, as compared with .13, the average of the past ten years, and .13 and .12 per 1,000 in the 33 great towns, and in England and Wales respectively.

The age incidence of persons attacked, and those resulting fatally was as follows :—

Age incidence of cases of Scarlet Fever, and of the fatal cases resulting therefrom.

	Years of Age.																						
	Under 1	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20—30	30 upwds.	Total.
Attacked	10	18	53	68	88	104	97	72	81	58	56	33	30	20	15	12	5	7	4	7	30	17	885
Died ...	1	3	4	3	2	3	4	1	2	1	0	0	0	0	0	0	0	0	0	0	1	0	25

It is evident from this Table that the disease showed a rapidly increasing incidence on children after the age of one year, reaching its maximum at the ages of 5 and 6, and slowly declining to the 10th year, with a rapid decrease as the older years are reached. With respect to mortality, the whole of the deaths, without exception, were those of children under ten years of age, the proportionate mortality having been greatest between the ages of one and two years.

In attempting to discover the cause for this large increase in the number of cases of Scarlet Fever, the following reasons stand out prominently, and no doubt all of them have assisted in the result.

1.—*Type of Disease.*—The type of the disease which has been prevalent has been on the whole exceedingly mild, and in many instances the initial symptoms and rash have been so slight that they have been regarded as transient feverish attacks to which children are so liable. That being so, it is not surprising to learn that in many cases the disease has not been recognised until the typical desquamation has made its appearance, or the subsequent occurrence of a case with more prominent initial symptoms has directed attention to the possibility of infection among the other children ; in other instances, patients have been sent home from school in the desquamation stage. Although many of the late notified and unnotified cases can be excused on this score, others have been discovered where only the most culpable negligence and carelessness could have failed to exhibit to any thinking parent the fact that the child was suffering from the disease. The unfortunate part about these mild cases is, that after a few hours' illness, many patients are to all appearances quite well again, and in consequence are allowed to attend school and mix with other children

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in the street, which must have resulted in spreading the disease very considerably, although it is impossible to say to what extent. The number of cases respecting which a notification was received a fortnight after the initial symptoms were noticed or which were only brought to light, by enquiries on the part of the Inspectors, was 38, and reasonable evidence of infection from these cases was obtained in over 50 nstances.

2.—*Epidemics of other Diseases.*—During the year cases of Rötheln and Measles have been at different times most prevalent. These cases are not notifiable, and in a district where they are present to any extent, cases of Scarlet Fever, are liable to be mistaken for them. This probability is increased by the fact that in the case of neither of these diseases is it considered necessary to call in a medical man. Several cases of this kind have come under my observation.

3.—*Outbreaks in Public Institutions.*—During the year 17 cases were reported from the Royal Infirmary, 3 from the Children's Hospital, 15 from the Royal Deaf and Dumb Institution, and 31 from the Railway Servants' Orphanage, making in all a total of 66 cases. With respect to the Infirmary cases, no doubt some of the patients were admitted whilst in the incubation stage of the disease, others were discovered waiting for treatment in the outpatients' department suffering from the disease in its acute stage, whilst the only suggestion which could be advanced to account for patients being attacked after having been inmates for some considerable time was, that infection had been introduced into the wards by visitors. Occasionally this almost amounted to proof, and the Infirmary authorities were wise in closing the Institution to visitors for a period, whilst the number of fever cases in the town was at its maximum. The outbreaks in the two Institutions are referred to later.

4.—*The Influence of Schools on the spread of Scarlet Fever.*—The part that schools play in respect to propagation of Scarlet Fever is one worthy of consideration, especially when it is recognised that the aggregation of children in class rooms, at ages susceptible to the disease, for several hours of the day, is a condition which would appear to be particularly favourable for assisting the spread of the disease. It has been noticed in many towns that the number of notifications received have been less during holiday periods than either before or after the vacation, and Derby is no exception to the rule. The subjoined Table is inserted to illustrate this fact, and the four weeks' summer holiday has been taken as the most suitable period for the comparison. The notifications received are divided into three groups, the middle group comprising the four weeks vacation and also the week following, this latter week being added because it seems probable that school influence could not make itself felt during that period, since the statistical week terminates on Saturday, and schools open on Monday, if four days are allowed for incubation, and the possible loss of a day for the exhibition of typical symptoms, in addition to a further loss of a day for notification, the greater part of the notifications due to infection at school would be received in the week following the opening of the schools. The other two periods represent the five weeks immediately preceding the above, and the five weeks subsequent to the holiday period.

The subdivision of the periods has not been made into fixed age groups, the better method for comparison appearing to be to subdivide into (1) those actually attending school, including private schools, (2) those who have not commenced, and (3) those who have finished. An enquiry is made in every case with reference to attendance at school, which makes this subdivision easy.

Summer vacation and the notification of Scarlet Fever.

YEAR.	5 weeks immediately preceding the holidays.			4 weeks holiday and the week following.			5 weeks immediately succeeding the previous period.		
	not commenced	now ~~own~~	finished	not commenced	now	finished	not commenced	now	finished
	attending school.			attending school.			attending school.		
1897	9	25	5	9	23	9	10	42	11
1898	9	35	4	7	18	9	8	46	5
1899	14	52	6	15	32	7	15	57	8
Total	32	112	15	31	73	25	33	145	24

It will be seen that among children attending school, there were during the years 1897-9, fewer notifications received in the holiday period than either before or after, though there is not a constant ratio, the ratio being considerably less in 1897 than in 1899, in which latter year Scarlet Fever was much more prevalent. It is also seen that after the re-opening of the schools, the number of notifications is in each year in excess of the number notified during the period preceding the vacation. If the three years totals are taken, the notifications show a fall of 35 per cent. during the holidays, and a rise of 29 per cent. during the period following the holidays, as compared with the first five weeks. If the other subdivisions are similiarly examined the holiday decrease is absent; at the years below school age, the figures are fairly constant, but at the years when school attendance has finished, the notifications are actually higher during the holidays than before or after. The assumption that schools materially assist in this dissemination of the disease is apparently justifiable.

The incidence of the disease on the children attending the following schools is given in detail, since the peculiarities of Scarlet Fever in respect to its propagation by means of school influence is clearly shown. They are the schools which, during the year, have shown the greatest incidence of the disease. All notified cases which attended them are set out, whilst those cases in which fairly reasonable infection from other sources than schools was ascertained, are noted. "Home" signifies that the probable infection was acquired from another case in the same house; "Outside," that contact had been ascertained with another case; "Return" indicates a return case, and "Desquamation" signified that the case was a late notification, and that the patient was desquamating when notified.

Railway Servants' Orphanage.—Number in residence: Girls 94, senior boys 91, junior boys 34, total 219, (May, 1900). Two departments: boys and girls; common dining room. Junior and senior boys have separate day-rooms, but a marked distinction is not made in dormitories. Separate playgrounds for boys and girls. Majority of children educated at Ashbourne Road Board Schools, remainder at Gerard Street Higher Grade Schools. It is impossible to speak

Progressive No.	Sex.	Age.	Date of Rash.	Progressive No.	Sex.	Age.	Date of Rash.
765	M	12	5-x-99	889	M	13	13-xi-99
765a	M	9	5-x-99	890	M	10	14-xi-99
765b	M	8	5-x-99	891	M	10	15-xi-99
798	M	11	12-x-99	907	M	13	18-xi-99
799	F	13	13-x-99	908	M	9	18-xi-99
800	M	12	15-x-99	920	F	11	18-xi-99
801	M	12	17-x-99	921	F	15	18-xi-99
802	M	9	17-x-99	922	M	7	19-xi-99
803	F	13	18-x-99.	923	M	11	20-xi-99
816	M	11	22-x-99	934	M	8	25-xi-99
821	M	12	24-x-99	940	M	9	26-xi-99
859	M	9	4-xi-99	943	F	7	27-xi-99
859a	M	11	4-xi-99	946	F	6	29-xi-99
887	M	11	12-xi-99	959	F	8	1-xii-99
888	M	11	12-xi-99	964	F	10	1-xii-99

definitely as to the origin of the outbreak, but I am inclined to the belief that the disease was introduced by means of the many illustrated papers which the boys were in the habit of taking into the senior day room from whatever source they could obtain them—the war pictures proving a strong inducement. The sequence of cases was as follows:—

The first three cases were reported on October 5th, and up to November 15th, eighteen cases had been reported: of these, sixteen were boys, and only two were girls, and these had duties to perform on the boys' side; all the boys belonged to the senior day-room, and the incidence of the attacks shows no relation to the dormitories; this fact led to the assumption that the infection lay in this senior boys' day-room.

This room is a very large one, and contains numerous lockers used in common, which on examination were found filled with various papers. These were ordered to be all destroyed, and all valueless books were burnt. Fumigation by sulphur, which was immediately preceded by a general wet-cleansing, was carried out, and no further cases occurred among the senior boys, except in one instance, in which the appearance of the rash corresponded to infection received prior to this disinfection. Now although Scarlet Fever had been persistently present in that Institution from October 5th to November 15th, it did not spread either to the junior boys or girls until the latter date, after which five cases followed among the junior boys, and six among the girls. A thorough and progressive disinfection of the whole building, which took about a week to effect owing to the exigencies of administration, was carried out, and the result was that no further cases followed in the disinfected portions of the building.

Deaf and Dumb Institution.—Numbers in residence: Boys 82 Girls 72. Separate departments, but class-rooms common to both sexes are used for educational purposes; there is also a common dining-room. Sanitary conditions satisfactory. Outbreak not definitely ascertained, but probably due to the introduction of infection after home visiting.

At this school it will be seen that two unrecognised cases were discovered, one apparently nearing the end of the third week of the disease, and the other certainly passed the fourteenth day, and although the first of these cases had mixed freely with the other boys, it is probable that only five boys and one girl were infected by him. The disease, with the single exception of case 228, remained localised to the boys' side from February 27th to April 3rd. The infections resulting from the second unnotified case are still less, and it is a matter of surprise that under what would apparently be the most favourable conditions possible, the disease did not show a much greater incidence on the school. After each case was recognised, the strictest disinfection and isolation were practised.

Progressive No.	Sex.	Age.	Date of Rash.	Remarks.	Progressive No.	Sex.	Age.	Date of Rash.	Remarks.
166	M	8	Feb. 27	Visited circus on Feb. 18.	264	M	8	Notified Mar. 29, in desquamation stage, probably about 18th—21st day of illness.	
192	M	7	Mar. 7	Home, Crewe St., March 5th.	265	M	9½	Mar. 30	
200	M	2	Mar. 10		276	F	26	Apl. 3	Teacher.
228	F	11	Mar. 21		278	F	6	Apl. 4	
243	M	8	Mar. 24		331	M	9	Apl. 18	
247	M	8	Mar. 25		345	F	10	Notified and desquamating on April 21st, not less than 14th day of illness.	
254	M	12	Mar. 27						
259	M	12	Mar. 28						
					389	F	9	May 8	

No. 1 *School.*—Two departments: Infants and Girls. Closets adjoin, but common usage prevented by bolted door. Separate playgrounds. Admirable system of water-closets, regularly cleansed, and in good condition. School-room floors cleansed with soap and water once in three months, and walls said to be swept every holiday. A visit was made a fortnight after the holidays, but the beams were thickly covered with dust. They could not well be reached without much trouble.

Progressive No.	Sex.	Age.	Date of Rash.	Dept.	Other source of infection.	Progressive No.	Sex	Age.	Date of Rash.	Dept.	Other source of infection.
58	F	5	23-1-99	Infts.		236	F	6	21-3-99	Infts.	
82	M	3	4-2.99	,,		250	M	6	26-3-99	,,	
83	M	3	31-1-99	,,		303	M	4	14-4-99	,,	
111	F	4	12-2-99	,,		334	M	6	21-4-99	,,	
135	F	4	17-2-99	,,		347	M	5	23-4-99	,,	desqua.
143	M	4	20-2-99	,,	outside	370	F	12	30-4-99	Girls	
154	F	5	23-2-99	,,		487	F	5	13-6-99	Infts.	
164	M	5	25-2-99	,,		571	F	8	12-7-99	Girls	
187	M	4	7-3-99	,,		687	M	6	8-9-99	Infts.	
203	M	5	13-3-99	,,		708	F	10	19-9-99	Girls	
206	F	9	14-3-99	Girls	home	716	M	4	22-9-99	Infts.	
212	M	5	16-3-99	Infts.		1037	F	5	16-12-99	,,	
220	F	9	17-3-99	Girls.							

This school shows an infection of the Infants' department from January 23rd to April 30th, without extension to the Girls' department. The only cases occurring in the Girls' department were: 206, who was probably infected at home, and cases 220 and 370. Case 347 was desquamating when visited, but had not attended school whilst suffering from the disease. From May onwards, the cases were separated by a sufficient interval to exclude school influence.

No. 2 *School.*—Two departments: Infants and Girls. Entrances are closely adjoining. Separate playgrounds and closets, but no effectual bar to prevent usage by members of the other department. Girls have satisfactory automatic flushed tank closets, and for infants' department, tank closets of a less suitable kind, rather offensive, and not too clean. Floors of school washed every twelve months, swept every night, and walls swept at holiday times.

Progressive No.	Sex.	Age.	Date of rash.	Dept.	Other source of infection.	Progressive No.	Sex.	Age.	Date of rash.	Dept.	Other source of infection.
6	F	3	23-1-99	Infs.	outside	439	F	4	29-5-99	Infs.	
6*a*	F	6	23-1-99	,,	outside	446	F	5	1-6-99	,,	
62	F	7	26-1-99	,,	outside	453	F	10	3-6-99	Girls	outside
138	M	6	19-2-99	,,		457	F	5	5-6-99	Infs.	home
146	F	9	29-1-99	Girls	desqua.	467	F	10	23-5-99	Girls	desqua.
146*a*	F	6	5-2-99	Infs.	desqua.	476	F	3	9-6-99	Infs.	
153	F	8	21-2-99	Girls		521	F	7	22-6-99	Girls	
167	F	5	28-2-99	Infs.	return	549	M	7	27-6-99	Infs.	
182	M	8	?	,,	desqua.	558	F	6	2-7-99	,,	
182*a*	F	6	6-3-99	,,	home	578	F	9	17-7-99	Girls	
189	F	8	?	Girls	outside	591	F	7	23-7-99	,,	outside
204	F	12	13-3-99	,,	home	594	F	6	27-7-99	Infs.	desqua.
222	F	9	18-3-99	,,	home	603	M	5	27-7-99	,,	
359	M	4	1-5-99	Infs.		606	F	4	28-7-99	,,	
372	F	7	3-5-99	,,		611	M	5	30-7-99	,,	outside
381	M	5	3-5-99	,,		702	M	4	13-9-99	,,	
385	M	7	6-5-99	,,		774	F	8	10-10-99	Girls	return
386	M	5	7-5-99	,,		812	F	6	22-10-99	Infs.	
392	F	10	8-5-99	Girls	outside	856	F	9	6-11-99	Girls	
404	M	4	12-5-99	Infs.		872	F	3	10-11-99	Infs.	
413	M	6	6-5-99	,,		879	F	10	13-11-99	Girls	outside
418	F	3	18-5-99	,,		901	M	5	18-11-99	Infs.	
426	F	4	22-5-99	,,		913	F	10	19-11-99	Girls	
432	M	6	27-5-99	,,		960	F	13	2-12-99	,,	
432*a*	F	3	27-5-99	,,							
437	F	8	30-5-99	Girls	outside						

An infection of the infants' department evidently occurred about the end of April; prior to that time, nearly all cases could be accounted for by contact with other cases or from an existing case in the house. Case 146 and 146*a* were desquamating when first visited, but they had not attended school in that condition. Case 182 was sent from school desquamating, but no extension of the disease resulted. The disease was prevalent among the infants until the end of July, and ceased with the holidays, to be introduced both in the infants' and girls' departments in October. Although prevalent in the infants' department from May 1st, the girls' department only became infected at the end of June, and the occurrence of the holidays prevented much extension. The infection of the other girls between May 1st and June 22nd could be traced: one unrecognised case (467) attended school until about the 11th day of the disease without serious result. The unrecognised case 594, among the infants, was only followed by three others; the child attended school last on July 24th.

No. 3 *School.*—Three departments: Mixed, Girls, and Infants. Four blocks of closets, two for boys, one for girls, and one for infants. Satisfactory.

Progressive No.	Sex.	Age.	Date of Rash.	Dept.	Other source of infection.	Progressive No.	Sex.	Age.	Date of Rash.	Dept.	Other source of infection.
5	M	11	?	Boys		455	M	6	3-6-99	Infs.	
5	M	6	?	Infs.		471	M	4	8-6-99	,,	
5	M	4	?	,,		472	M	5	8-6-99	,,	
68	M	10	30-1-99	Boys		491	F	5	15-6-99	,,	
129	F	6	15-2-99	Infs.		504	M	6	19-6-99	,,	
139	F	11	18-2-99	Girls		505	M	8	21-6-99	Boys	
155	F	5	11-2-99	Infs.		567	F	4	9-7-99	Infs.	
183	M	9	6-3-99	Boys	Home	573	F	9	14-7-99	Girls	
183*a*	M	7	4-3-99	,,	,,	580	F	7	?	,,	
184	M	5	4-3-99	Infs.		595	F	5	21-7-99	Infs.	
210	F	8	16-3-99	Girls		615	F	11	2-8-99	Girls	
227	F	7	19-3-99	Infs.		627	F	12	6-8-99	,,	
324	F	6	20-4-99	,,		750	F	8	1-10-99	,,	
329	F	5	20-4-99	,,		771	M	5	?	Infs.	
340	M	4	22-4-99	,,	Home	775	M	12	6-10-99	Boys	
346	M	12	26-4-99	Boys		777	M	4	14-10-99	Infs.	
358	F	10	26-4-99	Girls		826	F	5	27-10-99	,,	
407	M	5	14-5-99	Infs.		885	M	13	14-10-99	Boys	Home
408	M	11	14-5-99	Boys		885*a*	M	10	14-10-99	,,	,,
414	F	10	18-5-99	Girls		937	M	4	24-11-99	Infs.	
454	M	4	2-6-99	Infs.		974	M	5	4-12-99	,,	

In this school cases arose in both the Infants' and Girls' departments, particularly the former, from January to the middle of May, and among the boys at intervals sufficiently far apart to exclude school influence. The Infants' department was markedly affected from June 2nd to the commencement of the summer holidays. This infection extended to the girls' side on July 14th, after a period of about six weeks. Two cases occurred during the summer holidays among members of the girls' department, and a further infection of the Infants' school commenced in October; three boys also were attacked, but in two cases the infection was probably received from another case at home.

No. 4 *School.*—Two departments: Infants and Mixed. Separate play-grounds for boys and for girls and infants. Closet for girls and infants in same block, slight structural difference to differentiate the two, may be used by either, quite satsifactory, and frequently cleaned; floors of school washed every six weeks, and walls cleaned every holiday time.

Progressive No.	Sex.	Age.	Date of Rash.	Dept.	Other source of infection.	Progressive No.	Sex.	Age	Date of Rash.	Dept.	Other source of infection.
45	F	9	15-1-99	Mixed		495	M	4	18-6-99	Infs.	
52	M	6	23-1-99	Infts.		506	M	4	21-6-99	,,	
61	M	3	24-1-99	,,		524	M	7	24-6-99	,,	
66	F	8	27-1-99	Mixed		526	F	5	23-6-99	,,	
77	M	4	28-1-99	Infs.		531	M	5	23-6-99	,,	Home
80	F	8	2-2-99	Mixed		543	M	7	26-6-99	,,	
91	F	6	5-2-99	Infs.		544	F	6	26-6-99	,,	Home
96	M	6	?	,,		547	M	5	29-6-99	,,	
99	F	6	6-2-99	,,		550	F	4	1-7-99	,,	
131	F	3	? (l.n.)	,,		568	F	5	6-7-99	,,	
131*a*	M	5	? (l.n.)	,,		583	F	4	17-7-99	,,	
133	M	7	17-2-99	Mixed		584	M	2¼	16-7-99	,,	
147	M	5	20-2-99	Infs.		624	M	6	6-8-99	,,	Outside
169	M	5	28-2-99	,,		730	F	8	24-9-99	Mixed	
211	F	3	13-3-99	,,		734	F	6	24-9-99	Infs.	Desqua.
225	F	10	17-3-99	Mixed	Home.	755	M	12	5-10-99	Mixed	
234	F	8	20-3-99	,,		763	M	10	5-10-99	,,	
234*a*	M	3	20-3-99	Infs.		795	M	5	17-10-99	Infs.	
241	F	4	22-3-99	,,	Home.	840	F	7	30-10-99	Mixed	
420	M	13	18-5-99	Mixed							
420*a*	F	10	19-5-99	,,							

There was evidently an infection of both Infants' and Mixed departments of this school, dating from January to May 19th. In the Mixed department 6 girls and 2 boys were affected. The school then remained free for one month, after which the disease was reintroduced into the Infants' department, and cases continued to arise therein until the end of July, when the holidays supervened. During this latter outbreak the Mixed department remained quite free. At the end of September an unrecognised case introduced the disease for a third time into the school.

The behaviour of the disease in the above schools agrees in every respect with that noted by Dr. Niven in the Manchester schools in 1897, and admits of the following conclusions:—Scarlet Fever, unlike Measles, does not tend to spread with any degree of rapidity, even when there exists what are apparently the most favourable conditions for its propagation, such as cases of Scarlet Fever in the desquamating stage living under the same roof as, and being intimately associated with, large numbers of children unprotected in a great part by previous attacks of the disease, and of an age which is usually recognised as being particularly susceptible to attack. Although its extension is somewhat slow, it is markedly persistent, and the infection of a school is followed by the continual occurrence of cases, not in large weekly numbers, but usually extending over a considerable interval of time. The disease is, moreover, slow of diffusion through a school; it tends to cling to a special department, and infection of the rest of the school either does not occur at all, or only after several weeks. The peculiar persistent character of the infection probably accounts for the tendency which the disease has to assume endemic characters in our large towns, and in respect to schools it seems to me probable that an infection of some part of the school-room takes place. In all the above schools, the books necessary for education purposes are used in common among the members of each class, and in the case of infants, the sewing also. In respect to the sewing, however, small pieces of material are destroyed after use, but knitting wool is unravelled and used again. It is possible that in many instances the books or sewing may be the medium for conveying the infection, but whether this is so or not, the indications for preventing the spread of the disease are:—to disinfect the school-rooms of any department as soon as any special incidence on that department is noticed, and as the rooms are frequently large and airy, well-opened windows, following the application of a disinfectant in solution to every part of the room and furniture which will permit of it, would appear to be the best way to effect it. Books are difficult to properly disinfect, but considerable advantage might be expected from the use of a suitable box kind of apparatus, and generating formalin gas, at the same time seeing that the pages are opened as much as possible. Disinfection of the closets should be carried out, and a more liberal application of soap and water to these offices and to the floors and walls of some schools could only result advantageously.

5.—*Insufficient Isolation Accommodation.*—The number of cases of fever which were willing for removal to the Isolation Hospital, but whose removal was either delayed or not effected at all, is given on page 35, and in many cases this delay was probably responsible for the subsequent occurrence of a case in the same house, and though the exact influence of this deficiency in the spread of the disease cannot be accurately guaged, there is no doubt it was marked.

Diphtheria.

Mortality from Diphtheria during the past five years.

Year.	Ten Years' Average	1895	1896	1897	1898	1899.		
						Derby.	England and Wales.	33 Great Towns.
Rate per 1000	0.13	0.05	0.10	0.08	0.08	0.08	0.29	0.40

With the exception of Sunderland (0.06), Derby shows the lowest mortality from this disease in the thirty-three towns. This satisfactory decline in the prevalency of Diphtheria has been particularly evident during the past six years. The disease caused eight deaths, which is one less than in either 1897 or 1898. The comparison between the mortality in Derby, and England and Wales and the great towns is shown in the above Table, the average rate in the latter being five times that recorded in this town.

The total number of cases reported was 60, so that the case mortality was at the rate of 13.4 per cent. The following Table shows the age incidence of attacks, and of those ending fatally. 60 per cent. of the cases notified and all the fatal cases were below the age of ten.

Ages ...	Under 1	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15—20	20—25	25 upwds
Notification	1	2	2	7	6	5	8	3	3	0	0	3	1	2	2	5	4	6
Deaths ...	0	1	0	4	0	0	2	1	0	0	0	0	0	0	0	0	0	0

Measles.—

Mortality from Measles during the past five years.

Year.	Ten Years' Average	1895	1896	1897	1898	1899.		
						Derby.	England and Wales.	33 Great Towns.
Rate per 1000	0.37	0.05	0.31	0.16	0.50	0.22	0.31	0.46

Twenty-four deaths from this disease were registered during the year, a number which though less than the ten years' average, equals the number of Scarlet Fever deaths in an epidemic year. There is no doubt that many of these deaths from Measles are due to negligent nursing, resulting in the fatal form of chest ailments which frequently complicate attacks of this disease under such circumstances. During the year information respecting the existence of 312 cases of Measles was received from the heads of the various schools. Most of these cases were visited, and when stress of work prevented this, a handbill of precautions was sent by post, a copy of which is added as an appendix to this report.

The death-rate from this disease was equal to 0.22 per 1,000, and is thus considerably less than last year, or the ten years' average. This also compares favourably with the rate in England and Wales and the other large towns.

Whooping Cough.—

Mortality from Whooping Cough during the past five years.

Year.	Ten Years' Average	1895	1896	1897	1898	1899.		
						Derby.	England and Wales.	33 Great Towns.
Rate per 1000	0.36	0.25	0.46	0.22	0.26	0.08	0.30	0.38

Diarrhœa.

Mortality from Diarrhœa during the past five years.

Year.	Ten Years' Average	1895	1896	1897	1898	1899.		
						Derby.	England and Wale	33 Great Towns.
Rate per 1000	0.76	1.09	0.61	0.86	0.92	0.76	0.98	1.21

The total number of deaths registered from this disease was 95, and as in previous years, the larger proportion of them were those of infants under one year. 75 were under that age, and 84 were under the age of two. The total of 95 does not truly represent the mortality from this disease since it is probable that many of the 41 deaths of children under one year returned under the heading of Enteritis and Gastro-enteritis, should be added to the list. The preventive measures which were adopted have already been referred to.

Enteric Fever.—

Mortality from "Fever" during the past five years.

Years.	Ten years average.	1895	1896	1897	1898	1899.		
						Derby.	England and Wales.	33 Great Towns.
Rate per 1000	0.20	0.17	0.19	0.25	0.26	0.14	0.20	0.22

During the year, 141 cases of Enteric Fever were notified, of which 13 were cases brought from outside the Borough to the Royal Infirmary for treatment, thus leaving 128 cases occurring within the Borough—of these cases 14 died, giving a mortality rate of 0.14 per 1,000, which is the lowest death-rate recorded from this disease for many years. A comparison with previous years, and with England and Wales and the Great Towns is given above.

The age incidence of the disease and the resulting mortality was as follows :—

	Years of Age.												Total.
	under 1	1 and under 5	5 and under 10	10 and under 15	15 and under 20	20 and under 25	25 and under 30	30 and under 35	35 and under 40	40 and under 45	45 and under 50	50 and upwards	
Attacked	0	6	15	29	21	22	16	11	11	3	5	5	144
Died	0	0	0	2	3	2	2	0	4	0	0	2	15

It will be seen that the age period of greatest prevalency was 10 to 25, and that of the greatest fatality in proportion to attacks was 35 to 40.

Although the number of deaths was less than in previous years, the number of cases reported was higher than in any year since 1888, with the exception of last year, and the appended analysis of the cases is interesting since it exposes the existence of many of the causes which are recognized as predisposing to this disease. In the majority of the houses where the cases occurred, sanitary defects of varying degrees of gravity were discovered, such as untrapped drains, drains under houses, conditions tending to fouling of the sub-soil by means of defective privies, brick drains, want of satisfactory ash-pit accommodation, etc., and in view of the recent researches on the viability of the Eberth's bacillus—the specific germ of Enteric Fever—in soil polluted with organic matter, these conditions have an important bearing not only on the causation of the disease, but upon the possibility of the persistence of the infection in such places. In was formerly the practice to bury typhoid stools in the small back gardens of the houses where such cases occurred; this has been discontinued, and unless there is a satisfactory water-closet on the premises, special pails are now provided for the reception of the excreta, which are then taken direct to the refuse destructor and the contents burnt. Importance has been directed during recent years to the possibilty of infection from partaking of shell-fish, and in six cases there was evidence of the consumption of such edibles prior to the exhibition of the typical symptoms of Enteric Fever. In two instances the relationship was most pronounced, viz: cases 685 and 686, respecting which the following are brief particulars. Case 685 accompanied his parents to Torquay on July 29th, for their summer holiday; they stayed with relatives in that town. On August 5th, the two families visited a place called Coombe Cellars on the Teign and partook of a meal of cockles. At that time, there were cases of Enteric Fever in Exeter which had been traced to eating cockles taken from the river at this place. On September 8th, the two notifications were received—one member from each family—both having returned to this town. Case 686, a member of the Torquay family, came to Derby on August 22nd, and 685 returned home on August 31st. About this time the father of the Torquay family was also notified as suffering from Enteric Fever, and was admitted for treatment into the Torbay Hospital. The dates all admit of infection from the meal at Coombe Cellars.

The fact that Enteric Fever is communicable from the patient to others, if not too frequently lost sight of, is one certainly not sufficiently emphasised; in 14 cases there existed a strong presumption that the persons were infected from persons already recognised as suffering from the disease. Four of these persons were professionally engaged in nursing, but the others were either parents or relatives who were nursing patients or persons who had been brought immediately in contact with the sufferers during the period of illness. In nine other cases there was a possibility of direct infection, and the fact that in several of the cases illnesses already existed in the house which might have been unrecognised cases of Typhoid Fever is significant.

Very few cases can be shown to have a direct connection with visits to other places, particulars referring to these are given on page 55.

With reference to the cases in which no sanitary defects were discoverable, nor to which any cause for the outbreak could be assigned, it is important to notice that in many instances cases in the vicinity were known to have occurred, and further that in five houses the inmates of the houses had previously been attacked by the disease. In every instance when cases in the vicinity were known, it is mentioned in the "remarks" column.

An analysis of the cases of Enteric Fever notified during the year 1899.

A.—*Cases in which sanitary defects were prominent.*

Pro-gressive No.	Age.	Sex.	Accommodation.				Nuisances.	Remarks.
			W.C.	Pail.	Privy	Privy Cess-pool.		
17	15	M	...	1	...	...	Defective broken bell-trap to drain inlet, allowing escape of sewer gas.	Drain inlet near to door of house.
39	10	M	1	...	...	...	House refuse deposited on surface of yard.	
47	14	F	1	...	...	...	2 W.C.'s to six houses; drains unventilated, roof, windows and spouting out of repair.	Patient had to attend to cleansing of closets at the place where she worked Closets recently choked. Case next door.
48	36	M	...	1	...	...	Complained of smells from brook course in rear.	Complained of smells from sewers.
65	15	F	1	...	...	...	Defective iron trap to drains.	Case 47 in vicinity.
72	8	F	...	...	1	...	Untrapped drain in cellar, iron traps to drains, and offensive privy.	
89	5	M	1	...	...	...	Defective iron traps to drains which were choked, quantity of refuse stored in an adjoining building.	Case 20 in vicinity.
106	36	M	...	...	1	...	Defective iron traps to drain inlets.	
119	27	F	1	...	...	...	Untrapped drain in wash-house.	Washhouse communicates directly with house.
151	24	F	1	...	...	...	Drain in yard choked.	Drain also choked where patient worked.
170	22	F	...	...	...	1	Dilapidated privy cesspool, defective trap to drain inlet.	Defective trap against pump.
195	31	M	1	...	...	...	No through ventilation.	
251	30	M	...	...	1	...	D trap to yard drain. Drain inlet in cellar choked.	
260	25	M	1	...	...	...	No through ventilation.	Case 195 in vicinity.
261	12	M	1	...	...	...	Soil-pipe inside the house.	
288	8	M	1	...	...	...	Unsatisfactory ashpit.	
289	10	M	1	...	...	...	Ashes deposited on surface of yard.	
344	8	M	1	...	...	...	Pump out of repair, loose iron traps, several insanitary conditions.	House "Let in Lodgings."
357	9	F	...	1	...	...	Defective trap to drain under tap. 1 tap to four houses. Brick drains. No through ventilation.	Drain choked.
394	3	F	...	...	1	...	Foul, offensive privies and leaking ashpit.	
443	4	M	1	...	...	...	Offensive open ashpit. Yard paving defective. Iron traps under tap.	Case 364 in this district.

Progressive No.	Age.	Sex.	Accommodation.				Nuisances.	Remarks.
			W.C.	Pail.	Privy	Privy Cess-pool.		
488	20	M	...	1	...	...	Open ashpit, defective drains, no through ventilation.	Old single house.
523	$6\frac{3}{4}$	M	...	...	1	...	Defective iron traps, closets 6 yards from house.	
602	26	F	...	1	...	...	Defective urinal. Pigs kept near.	Public House.
628	10	F	1	...	...	...	Iron traps to drains. Small confined yard.	
661	51	M	...	1	...	...	Drains recently choked, drain from sink defective. Soft water cistern filled with sewage.	
668	5	F	1	...	...	...	Intercepting trap in chamber choked.	
672	18	M	1	...	...	...	Manure thrown on yard surface for fowls to pick. Defective trapped drain in cellar.	
698	25	M	...	1	...	...	Portion of drain under house.	
735	12	M	1	...	...	...	Stagnant water in cellar.	
766	19	M	1	...	...	...	Gully against yard tap partially choked. W.C. out of order. One tap to seven houses.	
837	15	M	...	..	1	...	Offensive privy and ashpit. Defective iron traps.	Case in this house two years ago.
842	38	F	...	...	...	1	Pump out of repair. Portion of yard drainage enters privy vault.	Case 288, 593 in vicinity.
860	18	M	1	...	...	...	Numerous animals kept in yard, dirty premises. Iron trap to sink discharge broken.	Recent cases in neighbourhood.
884	34	M	...	...	...	1	Iron trap to drain inlet, Drain in cellar. Fowls kept. Stable in yard.	
932	23	M	1	...	...	...	Open drain inlet near back-door.	Case 796 in vicinity.
961	39	M	...	...	1	...	Broken trap to drain inlet in passage.	
962	22	F	...	1	...	..	Soil-pipe inside house and unventilated.	
972	21	F	...	...	...	1	Foul privy.	
992	29	F	1	...	...	...	Drains under house. Drain inlet in cellar.	
1025	29	M	...	...	1	...	Offensive and dilapidated open ashpit three yards from house. Damp walls.	No through ventilation.
1026	42	M	1	...	..	...	Drains choked.	
174	46	F	1	...	...	...	Untrapped drain in cellar, but same discharges into an intercepting chamber.	

Progressive No.	Age.	Sex.	Accommodation.				Nuisances.	Remarks.
			W.C.	Pail.	Privy	Privy Cess-pool.		
726	14	M	1	...	...	...	Dirty, damp, neglected house, ashes deposited on surface of yard.	Case 658 in vicinity.
979	62	M	...	...	1	...	Privy and wet ashpit near house.	

B.—*Cases associated with Shell-fish.*

593	18	M	1	...	...	...	Brook runs by front of house.	Partook freely of whelks, after which he was sick.
685	14	M	...	...	1	...	Defective privy. Iron traps to drains.	Cockles. Combe Sellers. See Letterpress.
686	16	F	...	...	1	...	Defective privy. Iron traps to drains.	Cockles. Combe Sellers. See Letterpress.
715	11	M	1	...	...	...	Complaint of smell from sewer	Been on a visit to Cleethorpes and had partaken of oysters and cockles.
822	26	M	1	...	...	...	.. .. ..	Eaten freely of mussels for past two or three weeks.
868	26	M	...	1	...	...	No through ventilation to house. 1 tap to 6 houses. 2 tub closets to 6 houses.	Eaten freely of mussels.

C.—*Cases in which a reference to visiting other towns was made.*

179	39	M	...	1	...	...	.. .. ..	Traveller. Illness commenced out of Derby. Case 161 in vicinity.
653	20	M	1	...	...	...	.. .. ..	Visited Shottle. Drank of water from stream, nearto which were houses with Enteric cases.
669	23	F	1	...	...	...	Defective inlet to drain. Drainage of houses in court runs under this one.	Returned from seaside Aug. 5th, notified Aug. 25th.
673	34	M	1	...	...	...	Drains recently relaid.	Visited a village in Warwickshire, Aug. 8th, and at time water became scarce, notified Aug. 22nd.
685	14	M	...	...	1	...	... .	See shell-fish and letter-press.
686	16	F	...	...	1	...	.. .. ..	See shell-fish and letter-press.
715	11	M	1	...	...	...	.. .. ..	See shell-fish.
724	17	F	...	1	...	...	Defective bell trap near kitchen door.	Visited seaside. Illness probably not connected with visit. Case 669 in vicinity.
729	13½	M	...	...	...	...	House dirty, in bad repair. Floors and walls damp.	Notified 24, ix., 99. At Skegness second week in August, ill first week in September, recovered, came to Derby, and ill again 18th Sept.
796	24	M	...	...	1	...	Defective iron traps to drains.	Visited a neighbouring village, and fell ill after drinking some well water.

Progressive No.	Age.	Sex.	Accommodation.				Nuisances.	Remarks.
			W.C.	Pail.	Privy	Privy Cess-pool.		
806	49	F	...	1	...	...	Defective iron trap to sink drain, one tap to six houses.	Visited Liverpool. Probably infected before visit.
846	30	M	1	...	...	...	Ashes deposited on surface of ground, instead of using receptacle provided.	London Coster. Had visited many towns and was ill before he reached Derby.
969	3½	F	...	1	...	...	.. .. ..	Visited a village near Market Harboro' and was ill 3 days afterwards.
684	12	M	...	1	...	...	.. .. ..	Had made a number of visits to other places during the holidays.

D.—*Cases in which direct Infection was apparently the cause.*

3	7	M	1	...	...	...	Filthy condition of premises due to neglect of tenants.	From case 614, 1898. Nursed in room adjoining living room.
9	3	F	1	...	...	...	Drain choked three weeks before notification.	Played with case 660, 1898, during period of infection.
20	15	F	...	1	...	...	Poor houses, no through ventilation, general insanitary condition.	From case 666, 1898.
23	50	F	...	1	...	...	Poor houses, no through ventilation, general insanitary condition.	Nursed case 666, 1898.
70	11	M	1	...	...	...	Iron traps to drains. See case 9.	From case 9.
71	30	M	1	...	...	...	.. .. ..	From case 24.
75	32	F	1	...	...	...	See cases 9 and 70.	From cases 9 and 70.
607	19	F	1	...	...	...	.. .. ..	Wardmaid in Typhoid Ward.
629	18	F	1	...	...	...	.. .. ..	Occupied same bedroom as 607.
863	30	F	1	...	...	...	.. .. ..	Been engaged nursing Typhoid cases.
926	24	F	...	1	...	...	.. .. ..	Nursed case 828.
965	25	F	1	...	...	...	.. .. ..	Been engaged nursing Typhoid cases.
998	38	M	1	...	...	...	Outside W.C. choked, broken flush pipe connection. Bath waste untrapped.	Visited Enteric fever cases, and history points to possible direct infection.
1039	14	F	...	...	...	1	Loose iron traps to drains.	Slept with case 972.

E.—*Cases in which direct Infection was possible.*

24	9	F	1	...	...	...	.. .. ..	Case removed from house to Infirmary. See case 71.
255	18	M	1	...	...	...	.. .. ..	Had much illness in house similar to this, viz:—F 4, F 14, and father of present patient.
374	4	M	...	...	1	...	.. .. ..	Father just dead, and certified as having died from peritonitis

Progressive No.	Age.	Sex.	Accommodation.				Nuisances.	Remarks.
			W.C.	Pail.	Privy	Privy Cess-pool.		
442	9	F	...	...	1	...	.. .. ..	See case 374 above.
647	20	F	1	...	...	...	.. .. ..	Been engaged in laundry in which soiled linen from Typhoid cases was washed.
658	11	F	1	...	...	...	Overcrowded house. Food kept in small, dark, unventilated place under stairs.	Other patient been ill in house for ten days suffering from weakness.
898	10	F	...	...	1	..	Offensive privy and ashpit.	Brother had been ill for ten days, and mother had accepted a mattress from house where Typhoid had existed and which had been used by previous patient 6 months ago.
1002	10	F	...	...	1	...	. .. ..	Brother ill for 10 weeks previously, and stools were offensive.
1045	16	M	1	...	...	...	.. .. ..	Another patient in house who was suffering from peritonitis.

F.—*Other Cases.*

178	3	M	...	...	1	...	Pigs at top end of garden.	Case 104 in vicinity.
180	9	M	1	...	...	...	.. .. ..	.. .. ..
219	7	M	1	...	...	...	Damp walls.	.. .. ..
235	19	M	...	1	...	...	.. .. ..	Case in this house, 1898 (471)
238	22	F	1	...	...	...	Rabbits kept in cellar.	Cases 528, 24, 71, in vicinity.
293	13	M	1	...	...	...	1 tap to six houses	Case in this house, 1898. Also 47 in vicinity.
363	9	F	...	...	1	...	Poultry kept in rear. Dirty premises.	Case in this house, 1898 (637).
364	30	M	1	...	...	...	.. .. ..	Complained of smell from butler's sink at place where patient worked.
482	40	M	...	1	...	...	.. .. ..	Been cleansing foul drains.
485	13	M	...	1	...	...	.. .. ..	Cases 666 in 1898, and 20 and 23 in 1899 in this district.
511	10	M	...	1	...	...	.. .. ..	.. .. ..
654	6	F	1	...	...	...	.. .. ..	Case next door 2 years ago.
780	30	M	...	...	...	1	Iron traps.	.. .. .
805	24	M	1	...	...	...	.. .. ..	Case 715 in vicinity. Complained of smell from sewers.
828	14	M	...	1	...	...	Rabbits, pigeons and fowls kept in rear.	.. .. ..
829	23	F	...	1	...	...	Brook course at bottom of garden.	Several cases on same side of street in recent years.
963	40	M	1	...	...	...	.. .. ..	Cases 796 and 932 in neighbourhood.
971	46	M	...	1	...	...	Ashes deposited on ground.	.. .. ..
980	38	M	...	...	1	...	Pigs kept 25 yards away.	.. .. ..

Progressive No.	Age.	Sex.	Accommodation.				Nuisances.	Remarks.
			W.C.	Pail.	Privy	Privy Cess-pool.		
1013	27	M	1	...	...	...	Poultry kept in adjoining yard	.. .. ..
1032	14	M	...	1	...	...	Poultry kept near to house.	.. .. ..
1046	12	F	...	1	...	...	Pigeons kept in garden.	Cases in vicinity 528, 549, 24.
28	23	M	1	...	...	...	.. .. ..	.. .. ..
83	18	F	...	1	...	...	.. .. ..	Cases in vicinity 9, 70, 75.
839	23	M	1	...	...	...	.. .. ..	Case in this house 1899.
992	6	M	1	...	...	...	Cellar flooded during recent rains.	Cases in house in 1896 and 1897.
996	13	F	...	...	1	...	.. .. ..	Case 971 in vicinity.

Puerperal Fever.—There was only one death attributed to this disease during the past twelve months; there were eight notifications of the existance of the disease.

Influenza.—Influenza was again exceedingly prevalent, and this disease was responsible for 64 deaths, which is the highest number of any previous year, the nearest approach being 63 deaths in 1891. The rate of mortality was .6 per 1,000, as compared with a rate of .24 in 1898.

Housing of the Working Classes.—During the year, 18 houses were represented as unfit for human habitation. The following is a list of the houses together with their present condition:—

Situation of Houses.	*Result.*
1, 2, 3, 4, and 5, in Court 10, Bridge Gate ...	Closed.
46, Bridge Gate	Closed.
1, in Court 4, Bridge Gate	Closed.
56, Bridge Gate	Closed.
48 and 50, Bridge Gate	Demolition order passed.
6, Bold Lane	Demolished.
3, 4, and 5, in Court 5, Walker Lane	Closed.
6 and 7, in Court 5, Walker Lane	Closed.
11, Walker Lane	Closed.
7, Wright Street	Made habitable.

A demolition order was also passed by the Committee in respect to eight houses in Workhouse Yard, Walker Lane.

Dairies, Cowsheds, and Milk-shops.—A considerable amount of work has been carried out in connection with these places during the past year, and I am pleased to report that by the energetic execution of his duties Inspector Bould has brought about a considerable improvement in respect to them. Registration has been rigorously insisted upon, and the duty has been imposed upon persons selling milk by retail within the Borough who reside outside. 210 new registrations have been entered on the books during the year. With respect to the cowsheds, many improvements have been effected, but much yet remains to be done ; the chief work has been directed towards improving the condition under which milk is retailed in many small shops and houses. These places, in many cases, were found to be so situated as to render it impossible to prevent the milk becoming contaminated either by effluvia from the business carried on in the shop, and in respect to which the milk sale was a comparatively insignificant item, or from want of suitable vessels for storage to prevent contamination by dirt and dust. The importance of this is emphasised by the fact that many of these shops only receive a consignment of milk once a day, which results in some portion of the milk being unsatisfactorily stored for 24 hours, a sufficiently long period of time to admit of the milk acquiring dangerous properties. Many persons have given up retailing, and 80 purveyors had their names removed from the register; alterations were effected in many of the remainder with respect to the vessels and measures, the place of storage, suitable covers, cleanliness, &c., (see notices, pages 72 and 73), and on the whole I think milk is now stored and retailed in a fairly satisfactory manner.

A copy of the Dairies and Milkshops Amendment Order, 1899 (appendix), was served on every registered milk dealer, and the necessary arrangements for carrying into effect Part III. of the Derby Corporation Tramways Act, 1899, were prepared. In connection with this Act, and in accordance with the appended report, arrangements have been made with Professor Delépine to examine the milk from every dairy supplying milk within the Borough with respect to its freedom or otherwise from tuberculosis matter. Samples are now being regularly sent each week. Mr. Abell, M.R.C.V.S., was appointed Veterinary Inspector under the Act, and a small Sub-Committee was appointed to consider the reports as received and act thereon. The following is a copy of a report presented to the Sanitary Committee on the subject at their meeting on November 4th, 1899.

I have to present the following brief Report upon the administration of Part III. of the Derby Corporation Tramways Act, 1899.

The evident object of these sections is to provide the Sanitary Authority with increased powers for preventing the spread of Tuberculosis by means of specifically infected milk. The danger to the public from the presence of tuberculosis in milk is both real and widespread, and as the late Sir R. Thorne-Thorne stated, "It is absolutely necessary for those engaged in the pursuit of preventive medicine to take a prominent part in arousing the public to a proper appreciation of the fatal consequences to which it gives rise." The proof of the evil effects caused by milk specifically contaminated is based upon the mortality returns and experimental evidence, and may be stated to be somewhat as follows:—The disease which results from ingestion of tuberculous milk is known as tabes mesenterica, and if the mortality at ages at which milk constitutes a large proportion of the dietary is compared with the mortality from this disease at ages at which milk becomes an insignificant feature, wide differences are recognised. Thus, at the age period 15 to 45, for the years 1891-5, the death-rate from tabes mesenterica was 44 per million, whereas the rate under 5 years was 1,577 per million living, and the rate below one year, when milk constitutes practically the whole food, the mortality rate is no less than 4,046 per million. Fortunately, all tuberculous cows do not impart a dangerous quality to the milk, but only those suffering from tuberculosis of the udder. From the evidence presented to the Royal Commission on Tuberculosis in 1890, and which has since been confirmed, the Committee concluded that "the milk of cows with tuberculosis of the udder possesses a virulence which can only be described as extraordinary."

With respect to the amount of tuberculosis existing among cattle, various estimates have been formed, but probably 25 per cent. of milch cows suffer from tubercular disease. Sir R. Thorne estimated that there were 2,100,000 milch cows in England and Wales, and that some 525,000 suffered from this disease.

Investigations have been carried out by different Corporations for the purpose of ascertaining to what extent the bacillus tuberculosis is actually present in the milk supplies, and the following results have been recorded in different towns. It is important to note that where separate investigations have been undertaken, the country milk invariably shows a higher percentage of infectivity than the town milk.

Liverpool.—The Medical Officer of Health in 1897 reported that out of 144 samples collected within the city, 2.8 per cent. were proved to be infective, whilst 29.1 per cent. of 24 samples taken from supplies entering the city from dairies situated outside its boundaries, were shown to be infected with tuberculous material. Further results, obtained by Professor Boyce, are recorded by Dr. Annett (*Lancet*, January 20th, 1900). During 1898, 84 samples of town milk were examined, and 8.3 per cent. found to be tuberculous, whilst an examination of 28 samples of country milk showed that 17.8 per cent. were infective. During part of 1899, 75 samples of town milk, and 63 samples of railway or country milk were examined, the former proved to be tuberculous in 6.6 per cent. of the samples examined, and the latter in 17.4 per cent. The better sanitation of town byres is indicated by these results, and the power to take samples in farms supplying milk to the town, but situated outside the boundaries, is evidently a desirable one from the town's point of view.

Manchester.—During 1897 and 1898, samples of milk to the number of 108 were taken at the railway stations in its arrival from the country; of these samples, 20 were proved to tuberculous, that is, 18.5 per cent.

Professor Delépine reports that of the milk examined by him from various sources, 5.55 per cent. of 55 samples from town dairies showed tuberculosis, and that 17.6 per cent. of 125 samples from country farms were similiarly affected.

Cambridge.—The late Dr. Kanthack produced tuberculosis in guinea-pigs after inoculation to the extent of 56.3 per cent. from nine samples.

Hackney.—An enquiry into the milk supply of Hackney during 1899, and carried out by Dr. Macfadyen, showed that 22 per cent. of the samples examined were tuberculous.*

When it is remembered that there are only 29 persons who keep dairy cattle in the Borough as compared with 101 outside, and moreover that the farms within the Borough are as a rule, insignificant in size compared with those outside its boundaries, and that in consequence more than 80 per cent. of the milk supply of this town comes from outside districts, the importance of the above results becomes intensified.

Action having reference to this disease can be taken under the Dairies, Cowsheds, and Milk-shops Amending Order of 1899, which makes special reference to tuberculosis of the udder, and under this Order it is an offence to mix the milk obtained from a cow suffering from tuberculosis of the udder with other milk, or to sell such milk for human consumption. The difficulties in the way of recognising this disease are very considerable, since the Authority has no power to examine the cattle stalled *without* the Borough, although, within the Borough, the Inspector of Dairies or other authorised person in making his routine examination of Cowsheds in pursuance of the regulations drawn up, has ample opportunities of inspecting cattle stalled *within* the Borough.

The additional powers provided by the above Act are as follows:—

Section 2 imposes a maximum penalty of £10 for knowingly selling for human consumption the milk of cows suffering from tuberculosis of the udder.

Section 3 imposes a maximum penalty of £5 upon any dairyman, the milk of the cows in whose dairy is intended for sale for human consumption within the Borough, who knowingly keeps a cow suffering from tuberculosis of the udder with other cows in milk. The object of this isolation is evidently not for the purpose of preventing the spread of infection amongst the cows stalled in the byre, because no reference is made to the necessity for isolating animals suffering from pulmonary tuberculosis, which type of disease would actually be a greater source of danger in that respect than those simply suffering from disease of the udder, the object being rather to prevent the milk of a cow so suffering from either accidentally or wilfully being mixed with the milk of other cows.

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* Since writing this report the London County Council have received from Dr. Kelin his report on the examination of 100 samples of milk taken in London at the Council's request, and he found that 7 per cent. of these samples were tuberculous, and that one of the samples giving positive results came from Derbyshire.

Section 4 makes it compulsory upon every dairyman who supplies milk for human consumption within the Borough to notify to the Medical Officer of Health cases of cows affected with, or suspected of, or exhibiting signs of tuberculosis of the udder, and imposes a maximum penalty of 40/- for failing to do so.

It is evident, therefore, that the sale of milk from, and the isolation and notification of, cows suffering from tuberculosis of the udder is obligatory upon dairymen either within or without the Borough if they sell the milk produced within the Borough.

Section 5 gives power to the Medical Officer of Health to take samples of milk within the Borough, and also without the Borough, subject to the authority of an order of a Justice having jurisdiction in the place where the dairy is situate.

By Section 6, the Medical Officer of Health or a person authorized by him, if accompanied by a properly qualified Veterinary Surgeon, may inspect all the cows of any dairy within the Borough, from which milk is sold within the Borough, and if he suspects any animal to be suffering from tuberculosis of the udder, he may take samples from any individual teat. This latter would be, presumably, for the purpose of ascertaining whether the samples gave positive evidence of the existence of the tubercle bacillus. If the opinion of the Veterinary Surgeon that the cow was suffering from tuberculosis of the udder was an absolutely positive one, or if the sample of milk was on examination proved to be infective, the next subsection could come into operation, and the Medical Officer would thereupon report to the Committee—accompanying his report with the report of the Veterinary Surgeon—that tuberculosis would likely to be caused by consumption of the milk from this specific dairy. It would then be the duty of the Corporation to serve notice of not less than 24 hours' duration upon the dairyman to appear before them to show cause why an order should not be made, requiring him not to supply any milk from his dairy within the Borough until the order has been withdrawn by the Corporation. The actual work in connection with this Section will proceed very slowly; the examination of the milk will take up three weeks, and since the Committee only meets fortnightly, it is quite possible, unless special meetings are held, that a dairyman, the milk from whose dairy causes tuberculosis, would not have the supply stopped for four weeks after the fact became known; this is, of course, easily overcome by appointing a small Sub-Committee with power to consider the report, and to instruct the dairyman to appear at the next meeting.

With respect to milk from a dairy situate outside the Borough and supplying milk within the Borough, if the Medical Officer of Health has reason to believe that milk from a dairy is likely to cause tuberculosis in persons residing within the Borough, similar powers may be exercised, subject to obtaining an order of a Justice having jurisdiction in the place where the dairy is, situate, authorizing inspection. It is very difficult to see on what grounds the Medical Officer of Health can form such an opinion, except by taking samples as previously mentioned, and submitting them to bacteriological diagnosis, and in the event of a positive result, basing thereon his opinion as to the possibility of danger of the spread of tuberculosis.

To efficiently carry out these Sections it is quite plain that two essentials are necessary, viz. :—

(*a.*) Arrangements for the bacteriological examination of milk samples, and

(*b.*) The advice of a properly qualified Veterinary Surgeon.

a. The only certain method of recognising the presence of the bacillus tuberculosis in milk is by inoculation experiments upon animals which are susceptible to tuberculous infection. This is a procedure impossible to conduct except in a properly equipped laboratory, and requires both considerable time and care to efficiently carry out. The method of centrifugalizing milk and examining the deposit by simple coverslip preparation and staining is not sufficiently delicate, and many cases of infected milk would probably be missed if only this method were adopted. I would therefore suggest that arrangements be made with the Director of the Bacteriological Laboratory of the Owen's College (Professor Delépine), to undertake this work at a fixed charge, and by way of a preliminary experiment, that one sample be sent from every dairy both within and without the Borough, with a view of ascertaining to what extent the disease exists, any future action to be based on the results of a preliminary report giving full particulars of the enquiry, and the possible effects of present conditions on the public health as deduced from the report.

b. With respect to the advice of a Veterinary Surgeon, I am of opinion that arrangements should be made with one gentleman to give his advice when required. The duties would not be considerable, since he would only be called in to examine certain cattle within the Borough, which would not be in the nature of a regular routine of inspection at the present time. Outside the Borough he would proceed to the examination of cattle in such dairies as the bacteriological examination of the milk proved to contain the tubercle bacillus.

With respect to the order made requiring a dairyman not to supply milk from his dairy on account of the danger of transmitting tuberculosis to persons consuming the milk from such dairy, it would be a sufficient cause to withdraw the order provided the suffering cow was removed from other milking cows, that a guarantee was given that the milk should not be used for human consumption, and that the Medical Officer of Health should be immediately acquainted with the destination of the cow provided it was sold.

The other clauses of the Act provide that reasonable assistance shall be given during inspection, for penalties, and for safe-guarding any dairyman against damages for breach of contract after acting in accordance with the requirements of this Act. Further, where an order has been made requiring a dairyman not to supply milk within the Borough, notice of the facts are required to be served on the County Council of the administrative county in which the dairy is situate, and on the Local Government Board, and if the dairy is situate outside the Borough, on the Council of the Borough or County District in which it is situate.

With respect to the clauses authorizing the Corporation to apply to the tuberculin test, I submit that at the present time it will be wiser not to take any action in respect to it. Any general scheme of tuberculin testing should carry with it efficient registration to make it of permanent value, and a moment's consideration, after referring to the prevalence of tuberculosis, would show what the effect of any such general action would probably be. The education resulting from the working of the first part of the suggestion contained in this report will, I trust, make future action in this respect easier for officials and more acceptable to dairymen.

Offensive Trades.—The following are the principal offensive trades within the Borough :—

Fell Mongers	2	Skin Splitting, &c.	1
Soap Boilers	1	Parchment Manufacturers	1
Tallow Melters	2	Gut Scraping	1
Tripe Boilers	4	Bone Burning	1
Leather Tanners	1	Varnish Manufacturer	1
White Leather Manufacturers	1		

The premises of the above have been inspected by Inspector Bould, and found to be structurally in fair condition. Improvements have been suggested, and will in due course, be carried out.

One person commenced the trade of gut-scraper without having previously obtained the consent of the Local Authority; he was notified of the breach of law, and afterwards applied for consent to establish his business; this was refused, owing to the unsuitability of the premises.

Water Supply.—During the year the water supply has been regularly submitted to bacteriological and chemical analysis by your Medical Officer, and on the whole it has been of satisfactory quality. The following analysis represents a sample of the results obtained.

March 8th, Water from tap.—Colour, greenish in 2′ tube; total solids, 38; loss on ignition, 4; no charring; Chlorine, 1.9; free Ammonia, 0.0006; Albuminoid Ammonia, 0.0054. Oxygen absorbed in 15 minutes at 80°, 0.0094; in 4 hours, 0.0279; hardness, 19°. All above results expressed in parts per 100,000 except hardness.

Bacteriologically.—The water showed 57 organisms per c.c., cultivated on gelatine medium at 18° c., and 8 organisms per c.c. cultivated at 37° c. on Agar—Agar, whilst the nutrient medium prepared after Pa~~r~~rietti's method showed no growth after the addition of $\frac{1}{10}$ c.c. of water, and cultivation at 37° c. for 24 hours.

Sanitary Legislation, Bye-laws, etc.—Bye-laws for the regulation of houses let in lodgings, received the consent of the Council, and were approved by the Local Government Board on the 28th November, 1899.

Infectious Disease (notification) Extension Act.—This Act extends the provisions of the Infectious Disease (notification) Act, 1889, to this Borough, and repeals section 93 of the Derby Improvement Act, 1879. The only essential difference between the two is that the diseases known as Membranous Croup, Erysipelas, and Continued Fever, are now notifiable diseases.

Public Health Amendment Act, 1890.—Part III of this Act was adopted by the Council at their meeting held on August 2nd, 1899. This was the third occasion on which a recommendation to adopt this Act had been under consideration.

Derby Corporation Tramways Act, 1899.—Part III of this Act referring to the supervision of milk supplies is contained in the appendix to this report; it came into operation on January 1st, 1900.

Sale of Food and Drugs Act, (62 and 63 Vict. Ch. 51.):—The main provisions of this Act are as follows:—The Commissioners of Customs are to take for analysis samples of imported articles of food; in default of a local authority to carry out the provisions of the Act, the Board of Agriculture is empowered to take for analysis samples of food in the defaulting authorities district, and at the authority's expense; the law respecting the sale of margarine for butter is strengthened; the sale of condensed, separated, or skimmed milk in tins, or other receptacles can only legally be effected provided the tins or receptacles bear a label whereon the words "machine-skimmed milk" or "skimmed milk" are plainly and legibly printed; a trader may put in as a defence to any action a warranty or invoice, and provision is made for penalties in respect to a false invoice; penalties are also generally increased in severity.

The Derwent Valley Water Act., which was passed during the year has, of course, an important bearing upon the future sanitary condition of the town.

Meteorological Records.—I have to thank Mr. W. G. Carnt, Secretary of the Royal Infirmary, for the information from which the subjoined Table has been compiled. The highest maximum shade temperature was recorded during the month of August, and the lowest minimum in December; the greatest variation between maximum and minimum temperatures was also recorded in August. Over three inches of rainfall were registered in the months of May, June, and October, though the largest number of rainy days was noted in April and January.

TABLE I.—Shewing the Means of the Meteorological observations taken at the Derbyshire Royal Infirmary for the 12 months ended 31st December, 1899.

1899.	THERMOMETERS.				RAINFALL IN INCHES.			No. of Rainy days. 1899.
	Dry Bulb.	Wet Bulb.	Shade Temperature.		Infirmary Grounds 1899.	1898.	Average for past 15 years.	
			Maximum.	Minimum.				
January ...	39.7	38.2	46.2	35.4	2.80	1.28	2.04	22
February	38.8	37.6	47.4	34.4	1.35	1.61	1.30	15
March ...	40.0	37.4	49.7	33.1	1.15	1.31	1.57	12
April ...	46.5	43.4	54.6	39.5	2.66	2.09	1.74	23
May ...	50.6	46.4	58.0	41.8	3.04	2.42	2.06	17
June ...	61.4	55.7	68.7	50.4	3.05	1.59	2.17	10
July ...	64.5	59.6	71.9	55.4	2.42	1.15	2.31	12
August ...	64.7	59.4	73.3	53.8	.97	2.25	2.36	10
September	55.9	52.1	63.7	48.3	2.67	.42	1.84	17
October ..	45.2	43.8	55.3	39.4	3.01	2.56	2.64	15
November	46.8	44.7	52.1	41.5	1.35	2.34	2.10	8
December	35.1	33.8	40.8	30.9	2.44	1.98	2.21	19

The usual particulars relating to nuisances, slaughter houses, common lodging houses, canal boats, and the work in connection with the disposal of refuse, and conversion of privies, etc., have been tabulated by Mr. Wilkinson, Chief Inspector, and are appended to this report, as also is the information supplied by the Borough Engineer, Mr. Ward, in reference to sewer construction, cleansing, flushing, etc.

SANITARY INSPECTOR'S REPORT.

Ford Street Stables.

ACCOUNT FOR 1899.

Total number of horses at last Report, 74.
Bought during the year 13. Disposed of 9.

Inspector's Department	39
Surveyor's Department	33
Fire Brigade and Police	6
Total	78

Privy and Ash-pit Cleansing.

Night-work.—	Privies cleansed	7,862
,,	Ash-pits cleansed (ashes only)	4,672
,,	Privy Cesspools cleansed	1,109
Day - work.—	Dry Ash-pits cleansed	598
	Total	14,241

Night-work.—	Loads of Soil (excreta only)	6,741
,,	,, Ashes and Excreta	4,111
,,	,, Ashes only	4,896
Day - work.—	Loads of Ashes	20,225
	Total	35,973

Refuse Disposal.

Night-soil manure has been sold and delivered, as under :—

From Chester Depôt, 363 boat loads and 732 tons 7 cwt., and from ash-pits, direct to Farmers, 437 cart loads.

The old, or No. 1 Destructor, has been rebuilt and altered by the Borough Engineer, and is doing its work in a very satisfactory manner, and a reference to the particulars of ash-pit cleansing will at once reveal the fact that the two Destructors, with their six cells each, are none too large for dealing with so large a quantity of refuse.

Bakehouses.

At the close of the year 1898, there were 100 Bakehouses in use, with 32 vacant. To the former number 4 have been added, making 104 now occupied, and 32 still remain vacant.

The buildings are now in good sanitary condition and repair, and with few minor exceptions, there has been little fault to find with the way the places have been kept and conducted.

Canal Boats.

Visits of inspection to the canal	100
Boats inspected	67

Infringements of Acts and Regulations detected 33, as follows:—Certificates 4, Marking 6, Overcrowding 7, Cleanliness 4, Provision of Water Cask 9, Boats found in a bad state of repair 2.

Legal proceedings were ordered in two cases, and convictions obtained, but the hearing did not take place within the year 1899, so particulars will appear in next report.

Numerous letters, and 14 caution forms, were sent to owners to secure compliance with the law.

Number of boats on the Derby Register	45
Registered in 1899	2

The principal work in this section has been very effectively carried out by Assistant Inspector Bould.

Common Lodging Houses.

Application has been made for Registration of two houses, as Common Lodging Houses, but the premises not being adapted for that purpose, the application was not granted.

No deduction has been made, so the year was ended with 12 Registered Houses, having 84 bedrooms, and the sleeping accommodation, as in last report, viz, for 456 persons.

A special night inspection of each house was made in November, with the following result:—

Registered accommodation for	456
Persons occupying beds	322
Beds empty	134

Numerous verbal cautions have been given to secure full compliance with the Acts and Byelaws, and one offence reported for legal proceedings.

Inspectors visits by day	767	
" " night	13	
Total ...	780	

Registered Slaughter Houses.

Places in use at the commencement of the year		63
License lapsed (premises used for other purposes)		1
Visits of Inspection during the year		5,879
Places in use at the close of the year :—		
In the hands of private owners	48	
" " the Corporation	16	
Total	64	
Corporation Slaughter Houses untenanted	7	
Total number of Slaughter Houses in the Borough		17 71.

Unsound Food.

CONDEMNED AND DESTROYED.

2214 lbs. of Beef.
30 Baskets of Bilberries.
50 lbs. of Blackberries.
310 lbs. of Cat Fish.
984 lbs. of Cod Fish.
5 Cases of Cucumbers.
280 lbs. of Dried Codling.
448 lbs. of Dried Haddock.
432 lbs. of Egg Plums.
15 Baskets of Gooseberries.
296 lbs. of Halibut.
12 Hares.
72 lbs. of Kidneys.
113 lbs. of Livers.
448 lbs. of Mackerel.
140 lbs. of Megrims
5 Bags of Mussels.
678 lbs. of Mutton.
22 lbs. of Pork.
83 Rabbits.
196 lbs. of Shrimps.
21 Boxes of Tomatoes.
17 Turkeys.
130 lbs. of Veal.
203 lbs. of Whelks.
448 lbs. of Whiting.

Contagious Diseases (Animals) Acts.

Swine Fever has been the only disease occurring within the Borough under the above Acts, during the past year, one outbreak appearing in Upper Dale Road, and another in Nun's Street, but in neither instance was the source of the infection traced. The outbreaks were reported by wire to the Board of Agriculture, who took over the direction ~~of~~ of slaughter, disinfection, &c.

Fourteen animals were in contact, and eleven of these were found on post-mortem examination to be affected with Swine Fever, five of them dying of the disease and six being slaughtered. The diseased carcases, with the bedding and manure, were burned in the refuse destructor, and no further outbreak has occurred by infection therefrom.

During April six ailing pigs were brought from the country and exposed in the Cattle Market amongst other store animals. The disease was not sufficiently advanced to declare it Swine Fever, or probably so, and under the circumstances the animals were returned to the farm, under escort, the market premises thoroughly cleansed and disinfected, and the County Authorities communicated with. It was then found that the worst swine had not been sent to market, and the case was soon proved to be one of Swine Fever. In this instance also the precautions taken were effective in preventing spread of the disease.

Proceedings were instituted and a conviction obtained against the person in default.

Another matter may well be mentioned here, although not coming entirely within the provisions of the Animals Acts.

Stock owners who have an animal "a bit off," evidently think their best course, from their own point of view, is to send the animal to the market and get rid of it through one of the auctioneers, apparently caring nothing who buys, or the result.

The following Bye-law is in force, and is freely posted in the Cattle Market :—

"No person shall bring, or cause to be brought, any unwholesome or diseased animal into the market."

Under the powers of this regulation a strict supervision is kept over animals brought to the markets on both fat and store sale days. Sometimes the detection of diseased animals brings them within the scope of Contagious Diseases Acts, and sometimes within the diseased food sections of the Public Health Acts, but in the majority of cases it is only possible to bring them within the scope of the Markets Committee's bye-law. In any event the value of the service rendered in this connection by Assistant Inspector Turner can scarcely be over-estimated, and the most apparent results is a wholesome check upon traffic in diseased stock, and the raising of the standard of animals sent in for sale.

Police Court Proceedings.

No. of Cases.	Complaint.	Result.	Total Costs.		
			£	s.	d.
1	Selling adulterated Whiskey	Fined 10/- and Costs	1	8	0
1	,, ,, ,,	Fined 5/- and Costs	1	4	0
1	,, ,, Brandy	Fined 2/6 and Costs	1	1	6
1	,, ,, Rum	Fined 2/6 and Costs	1	1	6
1	Being in possession of Unsound Meat	Fined £15 and Costs	16	1	6
1	Selling Gregory's Powder not made up as directed by the British Pharmacopœia	Dismissed			
1	ditto ditto	Fined 2/6 and Costs	1	14	6
1	Not closing houses unfit for habitation	Order for closing			

Common Lodging House Bye-Laws.

1	Overcrowding Bedrooms ...	Fined 1/- and Costs	1	8	6
	Not keeping room cards up	Fined 1/- and Costs			
	Allowing Male persons to sleep together	Fined 1/- and Costs			

Proceedings taken under Market Bye-Laws.

1	Exposing Diseased Pigs in Cattle Market	Fined £2 and Costs	2	15	0
1	Exposing Diseased Store Cow in Cattle Market ...	Fined 10/- and Costs	2	2	0

NUISANCES

NOTICES SERVED.

To Cleanse and Repair foul Privies	64
,, ,, ,, Drains	285
,, ,, Foul Soft Water Cisterns and repair Pumps	11
,, ,, Dirty Houses	40
,, ,, ,, Bakehouses	32
,, ,, ,, Slaughter Houses	1
,, ,, ,, Passages and Yards	0
,, ,, ,, Cellars	3
,, Disconnect Sink Drains	6
,, Lay in new Drains and replace Brick Drains	28
,, Trap Drain Inlets	63
,, Lay on Town Water to W.C.'s	0
,, Lay on Town Water	1
,, Discontinue Boiling Offal	0
,, Provide extra W.C. Accommodation	1
,, Convert Privies to W.C.'s	62
,, Remove Accumulations of Manure, &c.	21
,, ,, Animals, Fowls, &c.	48
,, ,, Stale Swill	1
,, ,, Ash-pits	1
,, ,, Manure Pits and Cesspools	3
,, ,, Stagnant Water	3
,, ,, Soil Pipes from inside of Houses	6
,, ,, Drains from ditto	24
,, ,, Urinals	0
,, Ventilate W.C.'s, Soil Pipes, and Drains	1
,, Erect Urinals	3
,, Lay in Damp Courses and repair damp Houses	9
,, Repair Defective Spouting	73
,, ,, ,, Roofs	42
,, ,, ,, House Floors, &c.	9
,, ,, ,, Paving of Yards and Passages	37
,, ,, ,, W.C.'s and Urinal Fittings	62
,, ,, ,, Ashes and Manure Pits	5
,, ,, Dangerous Walls and Buildings	2
,, ,, ,, Cellar Coverings	2
,, ,, ,, Covers of Wells	0
,, Fill in disused Wells	7
,, Abate Smoke Nuisance	7
,, Relay Defective Drains	108
,, Prevent overcrowding	23
,, Provide Ash-boxes	17
,, Insufficient Water Supply	2
,, Not Complying with Common Lodging House Bye Laws	9
,, ,, ,, ,, Dairies, Cowsheds, and Milk Shops Regulations	266
,, Not complying with Factories and Workshops Act	1
Total	1389

DEALT WITH.

RESULTS OF NOTICES.

Foul Privies Cleansed and Repaired	210
„ Drains „ „	1243
„ Soft Water Cisterns Cleansed and Pumps Repaired ...	87
Dirty Houses „	67
„ Bakehouses „	36
„ Slaughter Houses „	1
„ Passages and Yards „	9
„ Cellars „	125
Sink Drains Disconnected	11
New Drains laid in and Brick Drains replaced	437
Drain inlets trapped	784
Town Water laid on to W.C.'s	11
Town Water laid on	0
Offal Boiling Discontinued	4
Extra W.C.'s accommodation provided	6
Privies converted to W.C.'s	115
Accumulations of Manure, etc., removed	103
Animals, Fowls, etc. „	23
Stale Swill „	1
Ash-pits Removed	41
Manure Pits and Cesspools removed and abolished	45
Stagnant Water removed	9
Soil Pipes from Houses removed	18
Drains removed	59
Urinals removed	2
W.C.'s, Soil Pipes, and Drains ventilating	76
Urinals Erected	5
Damp Houses repaired and Damp Courses laid in	8
Defective Spouting repaired	357
„ Roofs „	161
„ House Floors, &c. repaired	54
„ Paving of Yards and Passages repaired	419
„ W.C.'s and Urinal Fittings repaired	139
„ Ashes and Manure Pits repaired	11
Dangerous Walls and Buildings „	8
„ Cellar Coverings „	2
„ Covers of Wells „	2
Disused Wells Filled in	14
Smoke Nuisances abated	7
Defective Drains relaid	454
Overcrowding prevented	24
Ash-boxes provided	45
Defective and Insufficient Water supply repaired	2
Common Lodging Houses Bye Laws complied with	22
Dairies, Cowsheds, and Milk Shops Regulations complied with ...	308
Factories and Workshops Act complied with	2
Total	5567

NOTE.—In computing the number of nuisances dealt with, account has been taken of other nuisances discovered during the execution of works, and not covered by the notices.

Food and Drugs Act.

Samples submitted to the Borough Analyst.

No. of samples.	Article.	Genuine.	Adulterated.
7	Butter	7	...
7	Brandy	6	1
6	Gin	6	...
20	Milk	20	...
7	Rum	6	1
9	Whiskey	7	2
56		52	4

7.14 % of the samples purchased were adulterated.

Dairies, Cowsheds, and Milkshops Orders.

The following alterations have been made to the Register during 1899 :—

Entered as	Dairymen or Purveyors (resident within the Borough)	129
,,	Cowkeeper (resident within the Borough)	1
,,	Dairymen or Purveyors (resident outside the Borough)	72

The names of 80 Dairymen and 2 Cowkeepers have been removed from the Register, they having left the town, or discontinued trading in milk.

Persons known to be carrying on the business within the Borough under the Orders :—

Cowkeepers	29
Dairymen or Purveyors (resident)	373
,, ,, (non-resident) ...	101

Inspections made, 1877.

Ten years' work under the Food and Drugs Act.

ARTICLE.	1889.		1890.		1891.		1892.		1893.		1894.		1895.		1896.		1897.		1898.		Total Samples Purchased.	Per cent. of Samples Adulterated.
	Samples.	Adulterated.	Samples.	Adulterated.	Samples.	Adulterated.	Samples.	Adulterated.	Samples.	Adulterated.	Samples.	Adulterated.	Samples.	Adulterated.	Samples.	Adulterated.	Samples.	Adulterated.	Samples.	Adulterated.		
Brandy	...	...	...	...	4	3	12	3	12	3	7	2	6	2	7	2	4	1	4	1	56	30.35 °/o
Bread	...	...	...	...	4	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4	...
Butter	4	1	6	...	11	1	5	2	1	...	9	...	13	...	13	...	...	...	...	...	62	6.45 °/o
Camphor	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	...	2	...
Cheese	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	1	...
Cocoa	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...
Coffee	...	...	4	1	8	3	...	...	3	...	4	...	...	...	1	1	...	...	...	...	20	25.00 °/o
,, Mixture ...	...	...	...	...	4	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4	50.00 °/o
Gin	3	2	3	1	10	1	8	5	11	4	8	4	9	3	5	...	4	...	4	1	65	32.30 °/o
Golden Syrup ...	3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3	...
Gregory's Powder ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	11	2	11	18.18 °/o
Ground Ginger ...	...	...	...	...	...	...	...	...	...	...	...	...	6	...	...	...	...	...	...	...	6	...
Honey	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	5	...	...	...	6	...
Iodine, Lin. of ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	...	2	...
Jam	...	...	...	...	...	...	4	...	...	...	...	...	...	...	...	...	...	...	...	...	4	...
Lard	3	...	3	...	4	...	...	...	3	...	3	...	...	...	...	...	...	...	...	...	16	...
Lemon, Oil of ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	...	2	...
Malt Vinegar ...	...	...	...	...	...	...	...	...	8	2	...	...	6	...	...	...	4	...	...	...	18	11.11 °/o
Milk	16	2	9	...	10	2	24	3	20	4	18	2	10	...	27	4	12	2	24	3	170	12.94 °/o
Margarine	...	...	1	...	...	...	2	...	3	...	...	...	...	...	...	...	...	...	...	...	6	...
Oatmeal	...	...	3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3	...
Olive Oil	...	...	...	...	...	...	...	...	...	...	...	...	4	1	...	...	2	...	...	...	6	16.66 °/o
Pepper	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...
Quinine, Wine of ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	...	2	...
Rum	...	...	...	...	4	2	11	3	12	3	7	2	5	3	5	...	4	...	4	...	52	25.00 °/o
Soda Water	...	...	...	...	...	...	...	...	4	1	...	...	...	...	...	...	...	...	...	...	4	25.00 °/o
Sweets, Mixed ...	3	...	3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	6	...
Tomatoes	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...
Whiskey	3	2	3	...	10	3	9	3	12	3	10	3	13	5	8	2	4	2	4	...	76	30.26 °/o
	36	7	38	2	69	17	75	19	89	20	67	13	72	14	66	9	39	5	59	7	610	18.52 °/o
Per cent. of Samples Adulterated ...	19.44 °/o		5.26 °/o		24.63 °/o		25.33 °/o		22.47 °/o		19.40 °/o		19.44 °/o		13.63 °/o		12.82 °/o		11.86 °/o			

Infringements detected and remedied as under :—

Persons not registered	210
Keeping milk and vessels where liable to become contaminated	125
Using vessels of absorbent material	2
Dirty vessels or premises	18
Dirty cowsheds or troughs	4
Cowsheds not limewashed regularly	1
Milking cows with dirty udder and teats ...	1

Notices have been given, either written or verbal, to remedy complaints, but it must be distinctly understood that no such notice is necessary under the Orders or Regulations, and it will not be possible to continue to deal so leniently with offenders.

W. WILKINSON,

Chief Sanitary Inspector.

BOROUGH ENGINEER'S REPORT.

MANHOLES CONSTRUCTED DURING 1899.

Becket Street	1
Burton Road	1
Camp Street	1
Cherry Street	1
Cotton Lane	1
Craven Street May Street Thorn Street	9
Etwall Street Findern Street	3
Gower Street	1
Kedleston Road	2
Longford Street	3
Leman Street	1
Mansfield Road	1
Park Street	1
Sherwin Street	3
St. Mary's Gate	1
Slack Lane	1
Uttoxeter Old Road	3
Whitaker Road	1
Total	35

SEWERS NEW LAID DURING 1899.

Becket Street	9″
Bradley Street	9″
Camp Street	9″ & 12″
Craven Street	9″ & 12″
Etwall Street	9″ & 12″
Findern Street	9″ & 12″
Longford Street	9″ & 12″
May Street	9″ & 12″
Sherwin Street	9″ & 12″
Thorn Street	9″ & 12″
Uttoxeter Old Road (extension)	12″
Upper Dale Road (extension)	12″

SEWERS RELAID.

Market Place	9″ about 27 yards.

SEWERS CLEANED OUT DURING 1899.

	Loads.
Cotton Lane	23
Cotton Lane Culvert	44
Bridge Gate	12
Duke Street	12
Osmaston Road	41
Upper Dale Road	1
Warner Street	2
Total	135

Markeaton Brook	**10 Loads.**
River Dredging	**17 Boat Loads.**

WATER USED DURING 1899.

	Gallons.
Sewer Flushing	1,640,600
Court Flushing	1,961,000
Street Watering	8,614,600
Steam Roller	1,218,840
Cabstands, Bridges, Wood Paving, &c.	522,336
Total ...	13,957,376

Disinfecting Powder used during 1899 ...	4 Tons.
Disinfecting Fluid used during 1899	480 Gallons.

MANHOLES CLEANED DURING 1899.

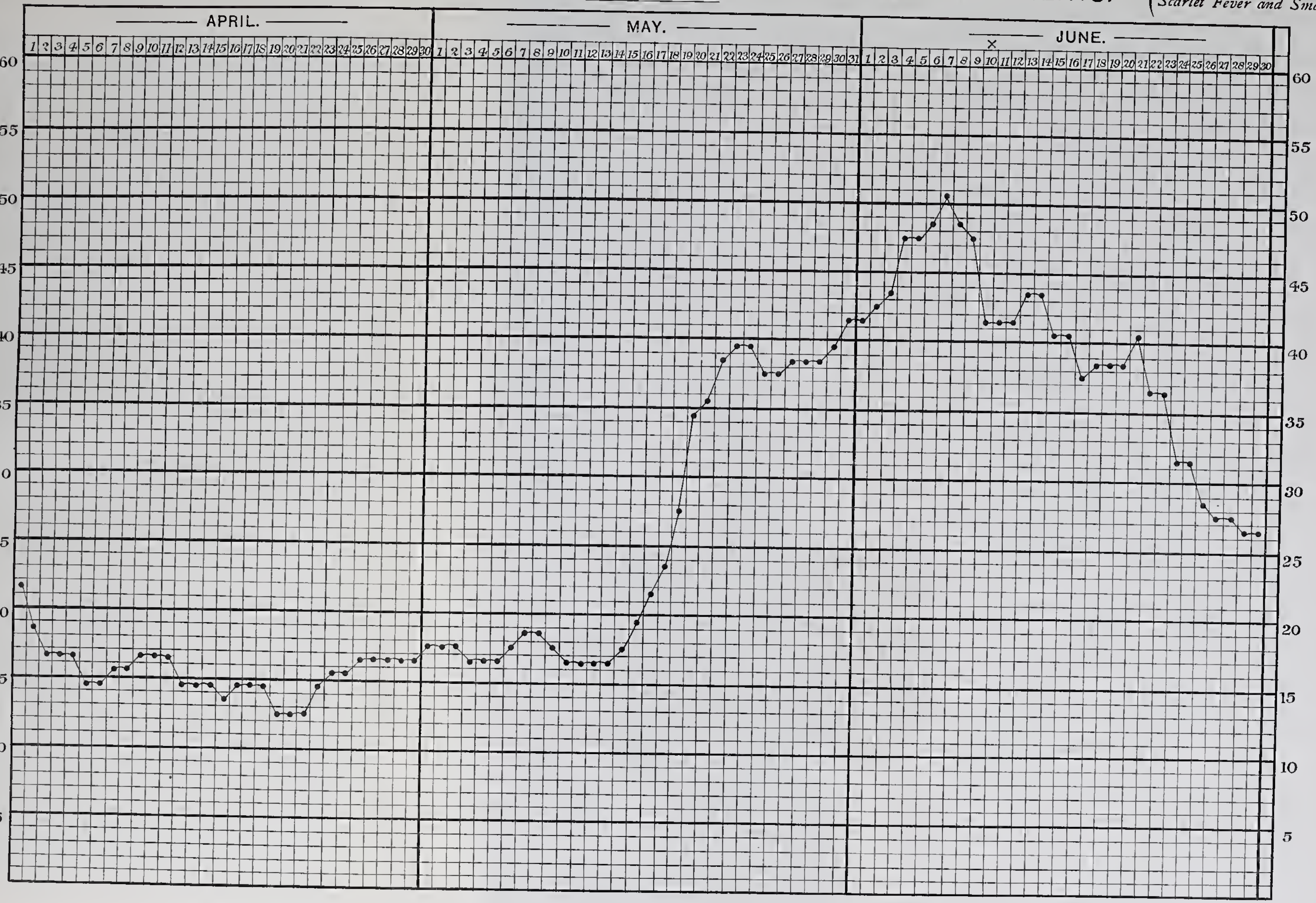
	Loads.		Loads.
Cambridge Street	2	Over Borough	3
East Street	1	Watson Street	5
Harriet Street	2		
John Street	2	Total ...	22
Nottingham Road	2		
Oxford Street	5		

JOHN WARD,

Borough Surveyor.

DERBY BOROUGH HOSPITAL—1895—DAILY RECORD OF PATIENTS.

(Scarlet Fever and Small Pox.)



× *Last case of Scarlet Fever discharged* 10*th June*, 1895, *leaving Small Pox only.*

APPENDIX B.

Table of Population, Births, and of New Cases of Infectious Sickness,

coming to the knowledge of the Medical Officer of Health, during the year 1899, in the Borough of Derby; classified according to DISEASES, AGES, and LOCALITIES.

	NAMES OF LOCALITIES adopted for the purpose of these Statistics; Public Institutions being shown as separate localities.	POPULATION AT ALL AGES.		Registered Births.	Aged under 5 or over 5.	NEW CASES OF SICKNESS IN EACH LOCALITY, COMING TO THE KNOWLEDGE OF THE MEDICAL OFFICER OF HEALTH.													NUMBER OF SUCH CASES REMOVED FROM THEIR HOMES IN THE SEVERAL LOCALITIES FOR TREATMENT IN ISOLATION HOSPITAL.												
		Last Census	Estimated to middle of 1899.			1 Smallpox.	2 Scarlatina.	3 Diphtheria	4 Membranous Croup.	5 Fevers. Typhus.	6 Fevers. Enteric or Typhoid.	7 Fevers. Continued	8 Fevers. Relapsing	9 Fevers. Puerperal	10 Cholera.	11 Erysipelas.	12	13	1 Smallpox.	2 Scarlatina.	3 Diphtheria	4 Membranous Croup.	5 Fevers. Typhus.	6 Fevers. Enteric or Typhoid.	7 Fevers. Continued	8 Fevers. Relapsing	9 Fevers. Puerperal	10 Cholera.	11 Erysipelas.	12	13
WARDS.	Arboretum ...	15,352	19,786		Under 5		47	2			3			...						23	1			2							
					5 upwds.		126	12			13			3						63	5			6			1				
	Babington ...	11,386	13,029		Under 5		32	1			...			...						15	...			...							
					5 upwds.		67	2			8			...						37	1			6							
	Becket	17,460	20,894		Under 5		70	3			2			...						37	1			2							
					5 upwds.		169	6			25			2						116	3			22			1				
	Castle	10,914	10,484		Under 5		14	3			...			...						9	3			...							
					5 upwds.		42	6			16			...						28	3			14							
	Derwent	5,666	5,897		Under 5		8	3			...			...						6	3			...							
					5 upwds.		28	4			10			1						19	2			7							
	Friargate	12,251	14,801		Under 5		26	1			...			...						9	1			...							
					5 upwds.		62	6			14			...						46	2			10							
	King's Mead ...	13,078	13,795		Under 5		19	2			...			...						10	1			...							
					5 upwds.		60	2			23			2						42	1			20							
	Litchurch	8,039	7,715		Under 5		14	2			1			...						6	...			1							
					5 upwds.		35	3			9			...						28	2			4							
	Royal Infirmary ...	...	...		Under 5		6	1			...			...						1	1			...							
					5 upwds.		11	1			17			...						5	1			17							
	Children's Hospital	...	...		Under 5		1	...			...			...						...	...			...							
					5 upwds.		2	..			...			...						...	...			...							
	Railway Servants' Orphanage	...	...		Under 5		..	...			...			...						...	...			...							
					5 upwds.		31	.			...			...						...	...			...							
	Deaf and Dumb Institution	...	...		Under 5		1	...			...			...						...	...			...							
					5 upwds.		14	...			...			...						...	...			...							
	TOTALS ...	94,146	106401	2984	Under 5		238	18			6			...						116	11			5			...				
					5 upwds.		647	42			135			8						384	20			106			2				

Notification of Infectious Diseases Compulsory since 1879.

Situation of Isolation Hospital. Derby Borough Isolation Hospital, Little Chester, for Scarlet Fever.
Derby Royal Infirmary for Enteric Fever and Diphtheria.

APPENDIX C.

BOROUGH OF DERBY.

PREVENTION OF MEASLES.

Measles being prevalent in certain parts of the Borough, the attention of householders is particularly directed to the following points :—

1.—Measles is not the harmless disease which it is frequently considered ; it causes a considerable number of deaths each year in this town, and on that account it behoves parents to pay every attention to sufferers from this disease, and to adopt every precaution against giving the infection to others.

2.—Measles is particularly infectious before the rash appears, and the symptoms of this stage of the disease are coughing, sneezing, redness of the eyes, and a feeling of illness ; these symptoms should be sufficient—when Measles is prevalent in a district—to justify a parent in keeping a child so suffering away from school, and isolating the sufferer in a bedroom.

3.—If measles exists in a house it is important that the younger members of the family should not be allowed to associate with other children, nor should they be taken to entertainments or allowed to journey in public conveyances.

4.—*Anyone attacked by Measles should be placed in a separate room, and kept warm. Other children in the house who have not been attacked by the disease, should not go to either Day or Sunday School for at least three weeks after the appearance of the eruption in the first case, and if further cases occur, not until three weeks after the eruption in the last case. The teacher of the school where the children attend should be at once informed.*

5.—Disinfection of the clothing, and the sick room will be of benefit, and suitable disinfectants for use in these cases may be had free of charge on application to the Sanitary Offices, Ford Street.

MEDICAL OFFICER OF HEALTH.

APPENDIX D.

BOROUGH OF DERBY.

PRECAUTIONS AGAINST CONSUMPTION.

Consumptive persons should remember that they are not suffering from an absolutely incurable disease, and also that they possess to a great extent the power of preventing other persons taking the disease. Attention to the following details will materially assist in attaining both ends.

1.—Sunlight and fresh air are the greatest enemies to the infection, and are also of the greatest assistance in promoting a cure. Consumptives should sleep alone, with the bedroom windows open top and bottom, and during the day time keep out of doors as much as possible, and whilst indoors occupy well ventilated rooms.

It is chiefly by means of the expectoration (spit) that the infection is spread, and the following rules should be strictly observed.

2.—Indoors—the expectoration should be received into small papar bags and at once burnt; at night, spitting cups containing a little disinfectant should be used. These should be washed out with boiling water daily.

3.—Out of doors—spitting in streets, tramcars, or any public places, should be carefully avoided, a suitable vessel should be carried about into which the expectoration may be received, and which afterwards may be washed out with boiling water.

4.—If handkerchiefs are used they should never be allowed to become dry, but should be soaked in boiling water whilst the expectoration is still moist. *It is in the dry condition that the expectoration becomes dangerous.*

5.—Dry cleansing of the rooms occupied by a consumptive should be dispensed with as much as possible: wet cleansing should be substituted, and all refuse from the room should be at once burnt.

Suitable receptacles for the reception of expectoration may be obtained on loan at the Sanitary Office, Ford Street, as well as a supply of disinfectants. Disinfection of the house will be undertaken free of charge on receipt of an expressed desire to that effect.

MEDICAL OFFICER OF HEALTH.

APPENDIX E.

COUNTY BOROUGH OF DERBY.

SUMMER DIARRHŒA.

During the months of July, August and September, and especially during August and the early part of September, Diarrhœa causes more deaths than any other disease. This disease is particularly fatal to young children, and it is hoped that parents and others having charge of children will give their earnest attention to the following precautions, and by following a few simple directions, assist in preventing the terrible waste of infant life which results from this disease.

This particular form of Diarrhœa is probably an infection like most fevers, and the development and spread of the infection is assisted by dirt and filth; whilst milk probably provides the means for conveying the infection to the system.

The greater proportion of these Diarrhœa deaths occur in the families of the poor, and particularly among *hand-fed infants.* The provision in the homes of the poor for the storage of food is often of the scantiest description and sometimes absent altogether; the difficulties, therefore, of keeping food in a sweet and wholesome condition are in such places very great, especially in the case of milk. On that account it is essential that milk should be purchased in small quantities—enough for a meal—and boiled immediately. It should then be kept in vessels which have been well cleansed with scalded water, and a clean cover placed on the top. Soap and water should be freely used to purify the place where food is stored, as well as the rest of the house; and, if it be necessary to use that abomination—the "Feeding Bottle"—take every precaution that it is clean and sweet; a clean cup and spoon are much better for feeding infants.

The natural food of infants is, of course, the Mother's milk, but if for any reason the child has to be "brought up by hand," the precautions printed on the other side should be exercised, and then not only will the risk of Diarrhœa be lessened, but many of the other dangerous stomach and bowel troubles of infants will also be avoided.

Cleanliness of the house and extra care with respect to the milk, are therefore the two chief things to be aimed at.

The Sanitary Authority are assisting in the prevention of the disease by flushing, at intervals, the surface of all courts and passages within the Borough.

HINTS ON THE HAND-FEEDING OF INFANTS.

1.—Don't use a feeding bottle twice without thoroughly cleansing it with a brush and hot water. Use the simplest bottle you can purchase, and choose one with as little indiarubber about it as possible.

2.—Don't give a child undiluted milk until it is at least six months old. For the first month mix one part of milk with two parts of water; from one to two months give half milk and half water; and from three to six months give two parts of milk and one part water. Use barley water instead of plain water for a change, and occasionally add a little lime water to the food. It is also well to boil all milk, especially during the summer months.

3.—Don't use stale milk for Infants' food; it should always be fresh and sweet.

4.—Don't use *separated* or *skimmed* condensed milk. It is better not to use condensed milk at all, because it requires accurate directions as to the proportions to be used for different ages; but, if you do, use only the best, and don't give it for too long without a change.

5.—Don't give a child arrowroot, cornflower, or soaked bread, until it is at least eight months old.

6.—Don't give a child scraps of food you may be eating; it is soon enough to begin with a little bread and gravy when twelve months old, and a small quantity of minced mutton chop when sixteen months old.

7.—Don't feed a child every time it cries. Feed every two hours for the first six weeks, and then gradually increase the interval.

8.—Don't be misled by the greedy and ravenous appetite of a young child; it is almost always a danger signal showing that the feeding is wrong.

9.—Don't give your child quack nostrums, soothing syrups, or patent medicines. If ill, or requiring physic, visit or call in a medical man.

MEDICAL OFFICER OF HEALTH.

APPENDIX F.

DERBY CORPORATION TRAMWAYS, &c. ACT, 1899.

"PART III.—INFECTIOUS DISEASES."

Section 31. (1) In this section—

"Dairy" shall include any farm, farmhouse, cowshed, milk store, milk shop, or other place from which milk is supplied, or in which milk is kept for purposes of sale.

"Dairyman" shall include any cowkeeper, purveyor of milk, or occupier of a dairy.

"Medical Officer" shall include any person duly authorised to act temporarily as Medical Officer of Health.

(2) Every person who knowingly sells or suffers to be sold or used for human consumption within the Borough the milk of any cow which is suffering from Tuberculosis of the udder shall be liable to a penalty not exceeding ten pounds.

(3) Any person the milk of the cows in whose dairy is sold or suffered to be sold or used for human consumption within the Borough who after becoming aware that any cow in his dairy is suffering from Tuberculosis of the udder keeps or permits to be kept such cow in any field shed or other premises along with other cows in milk shall be liable to a penalty not exceeding five pounds.

(4) Every dairyman who supplies milk within the Borough, and has in his dairy any cow affected with or suspected of or exhibiting signs of Tuberculosis of the udder shall forthwith give written notice of the fact to the Medical Officer stating his name and address and the situation of the dairy or premises where the cow is.

Any dairyman failing to give such notice as required by this sub-section shall be liable to a penalty not exceeding forty shillings.

(5)—(*a*) It shall be lawful for the Medical Officer or any person provided with and if required exhibiting the authority in writing of such Medical Officer to take within the Borough for examination samples of milk produced or sold or intended for sale within the Borough.

(*b*) The like powers in all respects may be exercised outside the Borough by the Medical Officer or such authorised person if he shall first have obtained from a Justice having jurisdiction in the place where the sample is to be taken an order authorising the taking of samples of the milk which order any such Justice is hereby empowered to make.

(6)—(*a*) If milk from a dairy situate within the Borough is being sold or suffered to be sold or used within the Borough the Medical Officer or any person provided with and if required exhibiting the authority in writing of the Medical Officer may if accompanied by a properly qualified Veterinary Surgeon at all reasonable hours enter the dairy and inspect the cows kept therein and if the Medical Officer or such person has reasons to suspect that any cow in the dairy is suffering from Tuberculosis of the udder he may require the cow to be milked in his presence and may take samples of the milk and the milk from any particular teat shall if he so requires be kept separate and separate samples thereof be furnished.

(*b*) If the Medical Officer is of opinion that Tuberculosis is caused or is likely to be caused to persons residing in the Borough from consumption of the milk supplied from a dairy situate within the Borough or from any cow kept therein he shall report thereon to the Corporation and his report shall be accompanied by any report furnished to him by the Veterinary Surgeon and the Corporation may thereupon serve on the dairyman notice to appear before them within such time not less than twenty-four hours as may be specified in the notice to show cause why an order should not be made requiring him not to supply any milk from such dairy within the Borough until the order has been withdrawn by the Corporation.

(*c*) If the Medical Officer has reason to believe that milk from any dairy situate outside the Borough from which milk is being sold or suffered to be sold or used within the Borough is likely to cause Tuberculosis in persons residing within the Borough the powers conferred by sub-section (6) of this section may in all respects be exercised in the case of such dairy provided that the Medical Officer or other authorised person shall first have obtained from a Justice having jurisdiction in the place where the dairy is situate an order authorising such entry and inspection which order any such Justice is hereby empowered to make.

(*d*) Every dairyman and the persons in his employment shall render such reasonable assistance to the Medical Officer or such authorised person or Veterinary Surgeon as aforesaid as may be required by such Medical Officer person or Veterinary Surgeon for all or any of the purposes of sub-section (6) of this section and any person refusing such assistance or obstructing such Medical Officer person or Veterinary Surgeon in carrying out the purposes of sub-section (6) of this section shall be liable to a penalty not exceeding five pounds.

(*e*) If in their opinion the dairyman fails to show cause why such an order may not be made as aforesaid the Corporation may make the said order and shall forthwith serve notice of the facts on the County Council of any administrative county in which the dairy is situate and on the Local Government Board and if the dairy is situate outside the Borough on the council of the Borough or county district in which it is situate.

(*f*) The said order shall be forthwith withdrawn on the Corporation or their Medical Officer being satisfied that the milk supply has been changed or that it is not likely to cause Tuberculosis to persons residing in the Borough.

(*g*) If any person after any such order has been made supplies any milk within the Borough in contravention of the order or sells it for consumption therein he shall be liable to a penalty not exceeding five pounds and if the offence continues to a further penalty not exceeding forty shillings for every day during which the offence continues.

(*h*) A dairyman shall not be liable to an action for breach of contract if the breach be due to an order under sub-section (6) of this section.

(7) The Corporation shall cause to be given public notice of the effect of the provisions of this section by advertisement in local newspapers and by handbills and otherwise in such manner as they think sufficient and this section shall come into operation at such time not being less than one month after the first publication of such an advertisement as aforesaid as the Corporation may fix.

(8) Offences under this section may be prosecuted and penalties may be recovered by the Corporation before a petty sessional court having jurisdiction in the place where the dairy is situate or the offence is committed and not otherwise.

(9) All expenses incurred by the Corporation in carrying into execution the provisions of this section shall be chargeable upon the district fund and general district rate and the Corporation may also charge upon the same rate any expenses incurred by them in the application by a Veterinary Surgeon of the tuberculin or other reasonable test for the purpose of discovering Tuberculosis to any cow whose milk is or was recently being supplied within the Borough provided that no such test shall be applied except with the previous consent of the owner of such cow.

(10) This section may be carried into execution by a Committee of the Council formed in accordance with and subject to the provisions of the Fourth Schedule to the Diseases of Animals Act 1894 except that the Committee shall consist wholly of members of the Council.

Dated this 11th day of October, 1899.

APPENDIX Q.

COUNTY BOROUGH OF DERBY.

Public Health Department,
Ford Street, Derby,
May 1st, 1899.

TO DAIRYMEN, COWKEEPERS, AND OTHERS.

Attention is directed to the important amendment of the Dairies, Cowsheds, and Milkshops Order of 1885, by the new Order of 1899, which is printed below.

The effect of this alteration is as follows :—

By Article 15 of the Order of 1885 it is an offence to mix the milk of cows suffering from Cattle Plague, Pleuro-Pneumonia, or Foot and Mouth Disease, with other milk, or to sell or use for human food such milk, or to sell or use for food of swine or other animals such milk unless and until it has been boiled. By the new Order of 1899 such disease of the udder as shall be certified by a Veterinary Surgeon to be tubercular must also be added to the diseases above mentioned. It is thus an offence punishable on conviction by a fine of £5 and costs and a continuing penalty of 40s. a day, to mix other milk, or to sell or use for human food the milk of any cow suffering from tuberculosis of the udder.

MEDICAL OFFICER OF HEALTH.

Article I.—This Order may be cited as "The Dairies, Cowsheds, and Milkshops Order of 1899."

Article II.—Article 15 of the Order shall be altered so that, for the purposes of the provisions of paragraphs (*a*) and (*b*) thereof the expressions in the said Article which refer to disease shall include, in the case of a cow, such disease of the udder as shall be certified by a Veterinary Surgeon to be tubercular; and the Order and the Amending Order shall apply and be construed with the modifications necessary to give effect to this Article.

Article XV. of the Dairies, Cowsheds, and Milkshops Order of 1885.

If at any time disease exists among the cattle in a dairy or cowshed, or other building or place, the milk of a diseased cow therein :—

(*a*) Shall not be mixed with other milk; and
(*b*) Shall not be sold or used for human food; and
(*c*) Shall not be sold or used for food of swine or other animals, unless and until it has been boiled.

Richard Keene, Limited,
Printers,
Iron Gate, Derby.

ROYAL STATISTICAL SOCIETY
12 JUL 1909